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THE Journal *of* Home Economics

Vol. III FEBRUARY, 1911 No. 1

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Ellen H. Richards

THE
Journal of Home Economics

VOL. III. FEBRUARY, 1911 NO. 1

THIRD ANNUAL CONVENTION, AMERICAN HOME ECONOMICS ASSOCIATION.

The third annual meeting of the American Home Economics Association was held in St. Louis, December 27 to 30, 1910, and brought together somewhat over 100 delegates, principally from the Middle West, but with some coming from New England, Texas, and Minnesota. As in the preceding meetings, the attendance was primarily from the section of country nearest the place of meeting, but there was a scattering of delegates from far distant points, who made the meeting truly national in its character. The suggestion of one member, however, seems pertinent that the time may come when in such gatherings, it will be necessary to recognize sectional lines and to provide, possibly, for simultaneous meetings in the East and in the West, with a joint national meeting in alternate years.

Certain general features of the St. Louis meeting were obvious to all who attended. First of all the purpose of the Association in placing the meeting at St. Louis had been to secure the coöperation of the economic and social science associations which were to meet in St. Louis during the holidays, viz. the American Sociological Society, American Statistical Association, American Political Science Association, American Association for Labor Legislation, and the American Economic Association. This purpose was successfully accomplished.

It was with the Economic and Sociological Associations, especially, that coöperation had been sought, and the officers of these associations were most kind in extending hospitality to our members, while several of their members took a prominent part on the Home Economics program. Last year at the Boston convention, which met with the American Association for the Advancement of Science, there

appeared on the Home Economics program papers by prominent chemists, physiologists, physicists, and others who pointed out the relationship of the natural sciences to household science, made suggestions regarding the development of courses of study, and in various ways brought to bear the results of their older sciences upon the newer field. A similar happy outcome was achieved at St. Louis.

Forming the most important item on the program were the two or three meetings in which the economists and sociologists presented papers. On Wednesday evening, Professor David Kinley, Dean of the School of Commerce at the University of Illinois, presented a paper describing a course in applied economics which he had given at the University of Illinois for a number of years for the benefit of students in the department of household science. A discussion of this paper by Professor Frank Fetter of Cornell University was a contribution from one who has always been interested in the development of college instruction in household science. On the following evening Professor George E. Howard of the University of Nebraska gave a masterly survey of courses in sociology, pure or applied, which might be included in a college school of household science. Professor Howard's outline provided for undergraduate and graduate instruction, and sets an ultimate goal which, like the suggestions of Professor Kinley will be of the utmost help to those who have in charge the development of collegiate instruction in household science. Professor Ellwood of the University of Missouri, and Mrs. Anna Garland Spencer, of the University of Wisconsin, gave further contributions on the sociological program.

Many additional papers on economic and sociological subjects appeared elsewhere on the program and were of the greatest interest, and point the way toward the development of profitable research and teaching in the application of economics to the household. Altogether the emphasis which the program placed upon economics and social topics marked a distinct advance upon any previous meeting of the Association.

Another aspect of the meeting which could not fail to impress an observer was the interest shown by the organized club women of St. Louis in the meetings of the Association. The emphasis on economic topics indicated an effort to put a sound scientific foundation underneath instruction in household science, while the effort to translate the lessons of science into a practical outcome for the housewife proved that Home Economics realizes its ultimate purpose.

On the first evening at the convention, a meeting was held in the Wednesday Club Auditorium at which different members of the Association, in brief informal addresses, presented different aspects of Home Economics as a practical movement for the betterment of household management. The topics and speakers were as follows: Home Economics and the Home, by Miss Bevier; Nutrition, by Dr. Langworthy; The Campaign for Honest Food, by Mrs. Walter McNab Miller; Housing and Sanitation, by Miss Berry; Textiles, by Miss Crooks; Home Economics and the Institution, by Miss Corbett; and a summary, When Women's Work is Ordered by Science, by Mrs. Richards.

Although disagreeable weather prevented a large attendance, all who were present gained a new sense of values. The Wednesday Club is one of the largest women's clubs in the country, with an active science section which is this winter studying problems of the household. The members of the club were therefore interested from the first in the meetings of our Association, and the club organization was most courteous in extending every hospitality to our members. The club rooms were placed at the disposal of members of the Association and at the close of the Tuesday evening meeting, a very pleasant informal reception was given our delegates.

On Friday afternoon at the close of the convention the Wednesday Club tendered a reception to Mrs. Richards, President of the Association, to which our members were cordially welcomed. The President of the General Federation of Women's Clubs, Mrs. Philip N. Moore of St. Louis, was constant in her efforts to make our meetings a success, serving as a member of the local committee and assisting in many of the arrangements. Altogether the assistance which the club women of St. Louis gave to the meetings contributed a great deal to their success, and the Association can only hope that the meetings proved of as much interest to them.

Another aspect of the St. Louis meeting which must have impressed every one, was the length and general excellence of the program. A two-day meeting had been tried last year in Boston and proved entirely inadequate. This year, therefore, a program extending over four days was arranged. While many persons felt it a hardship to leave home for so long a time at Christmas, and the question was raised continually whether a summer meeting would not be preferable, all found the extended program full of interest from first to last.

On the first day, after an opening address by Superintendent Blewett, of the St. Louis schools, and a paper by Dean Charters, of Teachers College, University of Missouri, on the Effect of the Point of View in Teaching Domestic Science, two section meetings were held; one on Home Economics and elementary education, the other on chemistry and dietetics, the latter of which presented a long series of scientific papers, 15 titles in all, besides a review of progress in nutrition by Dr. C. F. Langworthy. One must place emphasis upon the significance of so impressive a list of scientific papers, not alone in chemistry and dietetics, but at other points in the program, as in the administration section, the child welfare section, and the section on textiles. If the members of the Association will increasingly turn their attention to original research and constructive writing, the question whether Home Economics is a science will be answered once and for all.

Tuesday evening there was the meeting of the club women referred to above. Wednesday morning the administration section gave a very interesting program, beginning at 9 o'clock, including papers by Dr. Rubinow and Mr. Lebovitz on Household Service and Labor Saving Machinery, the outline of a thesis investigation by Mr. Leeds on The Economic Value of Housework, an interesting paper on European Household Thrift, by Miss Edith Talbot Jackson, a paper on The Use of a Residence Hall in Training Students in Management, by Miss Martha Bell of the College of Industrial Arts, Denton, and a statement of the Yale College Dining Hall by Miss Josephine T. Berry.

Wednesday morning there was a meeting on Methods of Instruction in Food Preparation with contributions from various universities, which raised questions of utmost importance and demanding further consideration. The annual luncheon occurred Wednesday noon and gave the delegates the opportunity of hearing from several interesting speakers including Mrs. Ware of the Warelands Dairy near Boston, Professor Fetter of Cornell, Mr. Knox, Assistant Superintendent of Schools, St. Louis, and others. Following the luncheon, a section meeting on child welfare was held at which there was given a report of the committee which has been investigating courses for the training of the professional child nurse, and a helpful series of papers on child care. It is evident that this topic of the care of the normal child is already finding its way into the elementary school, the high school, and the college, in connection with Home Economics teaching. Two research papers on this program by Miss Louise Stanley and Miss Amy L. Daniel encouraged those who are mindful of

the fact that progress in any field depends absolutely upon scientific knowledge.

Thursday morning a program on housing and sanitation was provided with papers on housing reform by Lawrence Veiller, Secretary of the National Housing Association, The Moderate Priced House, by Professor Mann of the University of Illinois, and Some Results of Investigation as to Household Equipment, by Helen Louise Johnson of the *Good Housekeeping* Magazine. A discussion of courses of instruction in housing and sanitative followed. A section meeting of those interested in administrative problems was made especially interesting by a discussion by Dr. Winthrop Talbot of the new openings in factory welfare work.

Thursday afternoon after the annual business meeting, a spirited discussion of extension work in rural communities and among women's clubs was held with Miss Bouton of the University of Nebraska as chairman and with discussions by several persons actively engaged in such work. Thursday's program concluded with the evening program on courses in sociology referred to above. Friday morning Instruction in Economics in the High School was presented, with papers on The Training of Girls as Consumers, by Miss Hanna of the University College, Chicago, The Development of Individual Responsibility through a Study of Social Problems, by Miss S. P. Breckenridge of the University of Chicago, and Professor Cole's paper on The Relation of Home Economics to General Economics. The economic program was continued under the direction of Miss Breckenridge, with discussions, in the afternoon, on cost accounting by Mrs. Richards, Knowledge of the Industrial System as a Basis for Consumer's Responsibility, by Miss Edna D. Day, and the Knowledge of the Productive System, by Miss Anna R. Van Meter.

Friday morning, one of the most interesting sections, that on textiles, occurred. Although hindered by lack of time, the papers on the Course of Study in Textiles, by Miss Marlatt and Miss Crooks, which gave the results of an investigation into the actual offering in textiles in different universities, attracted much attention. Other papers on this program were Miss Craig's paper on Textile Experimentation; Miss Fales' A Course in Historic Costume; Miss Winchell's, The Textile Testing Laboratory of the United States Army; A Study of Bluings, by Miss Balderston and Miss McKeown; and Miss Denny's Some Textile Tests.

The business session of the Association showed that its activities

are increasing in every way. Particularly pleasing was the series of reports from affiliated societies. Some of these associations are local organizations like the Home Economics Club of Grand Rapids and the New York City Association; others are state organizations, like those of Ohio and Iowa; still others are inter-state organizations, like the New England Association and that which is being organized in the mountain states of the West. Everywhere, however, there is manifest a tendency for workers in the Home Economics field to get together in whatever form may be most convenient, and exchange experience.

The report of the Editor of the JOURNAL OF HOME ECONOMICS brought home to the members of the Association a most acute problem which faces the organization. The JOURNAL, no longer being a privilege of membership, needs the support of every member of the Association in order to continue its growth and assure its future. So long as the burden of editorial management must be borne by voluntary helpers it means that every member of the Association should consider himself personally responsible for whatever coöperation he can give, whether in contributions for the JOURNAL, or in extending its subscription list, or in securing school or other advertisements for its pages.

The one item in the proceedings which will attract the attention of every member is the retirement of Mrs. Ellen H. Richards from the active presidency of the Association. Mrs. Richards had notified the committee on nominations that it seemed wise to her not to assume again the active presidency and, at the recommendation of the committee, the Association unanimously elected Mrs. Richards honorary president, and asked that she continue her active coöperation in all matters of Association business as far as it seemed wise for her to do.

The choice of Miss Bevier as active president of the Association was unanimously made and the Association may congratulate itself on having one at the helm who has been so identified with the Lake Placid Conference and the American Home Economics Association through all of their history.

While this is not the place to make an extended statement of the services of Mrs. Richards in connection with these organizations, one cannot omit in passing an expression of the feeling of regard which every member of the Association has for her, and also the dependence which the Association must still have upon her ripe wisdom and unfailing activity in all that concerns its welfare.

BENJAMIN R. ANDREWS.

MINUTES OF THIRD ANNUAL MEETING, AMERICAN HOME ECONOMICS ASSOCIATION.

The Third Annual Meeting of the American Home Economics Association was called to order on Thursday, December 29, 1910, at 1:30, at the W. T. Harris Teachers College, with the President of the Association, Mrs. Ellen H. Richards, in the chair.

Reports were given from the Home Economics Club of Grand Rapids, Michigan, the Ohio State Home Economics Association, the Nebraska Home Economics Association, the New England Home Economics Association, and the Home Economics Association of Greater New York.

It was voted that the appreciation of the American Home Economics Association be expressed to the Home Economics Association of Greater New York, for the quarterly bibliography of periodical literature in Home Economics, which that association has published during the past two years; and that the American Association approve the request of the New York Association that the bibliographical material prepared by the New York Association be, as far as practicable, included in the JOURNAL OF HOME ECONOMICS.

There was reported from the Home Economics Association of Greater New York a request that the American Association appoint a committee to consider terminology in Home Economics. It was voted that a committee be appointed by the President of the American Association to consider nomenclature in domestic science and domestic art in elementary and secondary schools, the committee to consist of the President and four members and to make a report at the San Francisco meeting of the National Education Association in July, 1911. Subsequently the committee was announced as consisting of Mrs. Richards; Mr. George P. Knox, assistant superintendent of schools, St. Louis; Miss Rosa Bouton of the University of Nebraska; Miss Mary Wright, director of domestic economy, public schools, Philadelphia; and Dr. A. C. True of the U. S. Department of Agriculture, Washington, D. C.

The Secretary presented a letter of greetings from Miss Alice Ravenhill, who recently came to America and is making her home in

Vancouver, British Columbia. The Secretary was directed to extend the greetings of the Association to Miss Ravenhill and express the hope that she might be present at the next convention. A similar letter was presented from Miss Mary Urie Watson, a Vice-President of the Association, and the Secretary was directed to convey to her the greetings of the Association and its regrets at her absence.

Miss Craig of the College of Industrial Arts, Denton, Texas, reported the probability of an organization of a State Home Economics Association in Texas in connection with the State Teachers Association. Miss Crooks of Milwaukee-Downer College reported that a State Home Economics Association has been organized in Wisconsin, with Miss Abby L. Marlatt, of the University of Wisconsin, as president.

The President presented a report from Miss Huntington of the Agricultural College of Utah regarding the organization of an Interstate Home Economics Association in the mountain states, at a preliminary meeting held last February.

Committee on Affiliated Societies:—The Committee on Affiliated Societies through its Chairman, Miss Van Rensselaer of Cornell University, reported that there were opportunities for important work in connection with women's club organizations and other national organizations which are related to the Home Economics field, but that it was difficult to make progress without funds for the preparation and circulation of printed material. This report was accepted, and the committee continued with authority to collect and expend funds.

Committee on Course of Study in Home Economics in Agricultural Colleges:—Miss Bevier reported that this committee, which consists of Professor Jaffa, Miss Day, Miss Huntington, Mrs. Van Zile and Miss Bevier, held a meeting in Chicago with Dr. A. C. True of the Department of Agriculture, Chairman of the Committee on Courses of Study of the Association of Agricultural Colleges. At this meeting a course of study was drawn up which lays emphasis for the present on courses of instruction in food, clothing and shelter. The report of the committee was accepted, the committee was continued and its full report was ordered published in the JOURNAL OF HOME ECONOMICS. (See page 25.)

Committee on College Entrance Requirements:—This committee, composed of Miss Jennie Snow, Miss Edna Day and Miss Louise Stanley, appointed by the President, reported that they had had a preliminary meeting with Mr. William M. Butler, President of the Yeatman High School in St. Louis and Chairman of the Committee on College

Entrance Requirements of the American Federation of Teachers of Mathematical and Social Sciences. It was voted that the committee be made permanent with power to increase its membership, and that it be directed to bring in a report on college entrance requirements in Home Economics at the next meeting of the Association.

Committee on Administration and Administration Section:—The President reported that a Committee on Administration had been appointed at the close of the Second Annual Convention, composed of Mrs. Annie Dewey, Miss Adelaide Nutting and the Secretary of the Association; that this committee had organized a sectional conference at Lake Placid, in June, 1910, on household institution management, which was attended by some fifty persons; that the Lake Placid meeting had provisionally organized as an administrative section of the American Home Economics Association, with a Chairman, Secretary and Committees, and that the following request is now presented from the Executive Committee of the Section Association: "It is requested that the American Home Economics Association recognize the organization of the Administration Section comprising two divisions,—Home and Institution Management; and that the Association provide a form of organization for the Administration Section and such other sections as may from time to time be authorized. It is suggested that the sectional organization shall provide for proper officers, including a chairman, secretary and such committees as the section shall from time to time authorize."

The request of the Administration Section as to the organization of sections was referred to the Executive Committee for consideration.

Committee on Legislation:—Miss Bouton reported for this committee the following resolution:

> RESOLVED: That the American Home Economics Association, recognizing the imperative need of better housekeeping and the importance of the work which the United States Bureau of Education carries on in improving the means of public education, recommends most earnestly to the consideration of Congress the request of the United States Bureau of Education for the addition to its staff of a specialist in education for housekeeping.

Graduate School of Home Economics:—Dr. C. F. Langworthy presented a report on the Graduate School of Home Economics. This report has already appeared in the JOURNAL for October, 1910 (pp. 425-8), with the exception of its closing paragraph, which is as follows:

After the close of the school the matter of taking over the Graduate School of Home Economics was duly referred to the committee of the Association of Agricultural Colleges and Experiment Stations which has the Graduate School of Agriculture in charge. The committee recognized the importance of the Graduate School of Home Economics and the desirability of uniting the two schools, for they fully appreciate that Home Economics is an important part of the curriculum in a large number of the agricultural colleges. Unfortunately, at this time they do not see their way clear to take over the Graduate School of Home Economics owing to the fact that the development of the Graduate School of Agriculture, normal and logical though it has been, is such that the available funds are no longer adequate for its proper maintenance, and the committee is trying to devise some way of meeting the situation which arises in connection with the next meeting of its school. Dr. True, speaking for the committee, says they believe thoroughly in the desirability of continuing the Graduate School of Home Economics, and suggests that it be taken over by the American Home Economics Association and held in 1912 on something the same lines as heretofore. He promises the coöperation of the Graduate School of Agriculture in so far as possible and hopes that should those who are interested in the matter remain of the same mind Home Economics courses can eventually be provided in the Graduate School of Agriculture, in accordance with the proposal made to the Association of Agricultural Colleges and Experiment Stations.

It was decided that the American Home Economics Association take over the Graduate School of Home Economics, with the understanding that the School shall, in large part, be self-supporting. The School is to be administered through a Committee on Graduate School, consisting of Mrs. Ellen H. Richards, Miss Caroline L. Hunt, Mrs. Alice P. Norton, Miss Edna Day, Miss Abby L. Marlatt, Miss Martha Van Rensselaer, Dr. C. F. Langworthy, and Mrs. Alice D. Feuling, which was authorized to make plans for the next session. The thanks of the Association were tendered to Dr. True for his kindness and coöperation in making successful the meeting of the Graduate School of 1910.

Report of the Treasurer:—The report of the treasurer (see page 19) was read and was referred to the Finance Committee as a Committee on Audit.

Finance Committee's Report on Budget:—The Finance Committee reported that since the Executive Committee had arranged that certain postage and stationery expenses should be met by the JOURNAL office, the only expenses remaining for the Association to meet were those of the annual meeting and small incidental expenses. On the basis of this year's expenditures, this sum should be at least $350, which it was the judgment of the committee could not be provided with the annual fee only twenty-five cents. With the annual fee $1.00 it

would be possible to meet current expenses, to contribute somewhat to committee expenses, and to give some assistance to the JOURNAL if necessary. The committee therefore recommended an advance to $1.00 for the annual fee, the distribution of the income for 1911–1912 to be left in the hands of the Executive Committee.

Amendments to the Constitution and Bylaws:—Due notice having been given of intention to amend the constitution and bylaws, the following recommendation from the Executive Committee was unanimously adopted:

RESOLVED, That Article VI of the Constitution be amended to read, "The Association shall issue a professional Journal which shall be the property of the Association," omitting words "and shall be sent to members as a privilege of membership."

It was also unanimously voted that Article III of the Bylaws, be amended in Section III, to read: "(1) annual, dependent on payment of dues, $1.00."

The action of the Executive Committee in temporarily reducing the membership fee to twenty-five cents, and in effecting the separation of the subscription to the JOURNAL from the membership dues, was unanimously approved and that Executive Committee authorized to put the $1.00 fee into effect as soon as possible.

Proposed Amendment to the Constitution:—Notice was given of a proposed amendment to the constitution, separating the office of the Secretary from that of the Treasurer.

Annual Meeting:—A communication from the Executive Committee of the Administration Section recommending that the Annual Convention be held the last week of June, and that the program extend over a week providing at least two meetings a day for each section, besides general meetings, was received, and the request referred to the Council for adjustment.

ADJOURNED MEETING.

The meeting was resumed at 1:30 p.m., December 30.

Editor's Report:—The report of the Editor of the JOURNAL OF HOME ECONOMICS was read and the following resolution was unanimously adopted:

RESOLVED, That we express our appreciation of the difficulties with which the Editor of the JOURNAL of HOME ECONOMICS has been confronted, and our deep gratitude for her able editorship under these conditions.

Management of the Journal:—The Executive Committee was authorized to make any adjustments necessary with regard to subscrip-

tion rates, editorial management, advertising, and other matter in connection with the publication of the JOURNAL OF HOME ECONOMICS upon a self-supporting basis. The committee was also authorized to arrange for clerical assistance, in connection with the membership records of the Association.

Committee on Audit:—The Financial Committee reported that an examination of the accounts of the Treasurer indicated that these were correct. Both the reports of the Treasurer and of the Committee were approved. The Executive Committee was given increased authority as to the depositing of funds.

Resolutions:—The Committee on Resolutions through its chairman, Mr. LeBosquet, reported resolutions tendering the appreciation and thanks of the Association to Mr. George Platt Knox, Assistant Superintendent of Schools, St. Louis, and Chairman of the Local Committee, whose wise preliminary plans and careful supervision contributed much to the success of the meeting; to each member of the Local Committee and to the various local organizations who have coöperated with it; to Mrs. Washington E. Fischel for making arrangements for the annual luncheon; to Mrs. E. R. Kroeger, President of the Wednesday Club, and to the Club for its hospitality and many courtesies extended to our delegates; to Miss Abby L. Page, Chairman of the Committee on Accommodations; to Miss Roberta McCulloch, who prepared the list of places of interest; to Miss Schmitz, Miss Buschman, Miss Denton and Miss Flickner, and others who gave their services in connection with the registration of delegates; and to the Board of Education of the St. Louis public schools for tendering the use of the W. T. Harris Teachers College for the meetings.

Thanks were also extended to Dean Kinley of the University of Illinois, and Professor Fetter of Cornell University, Professor Howard of the University of Nebraska, and Professor Ellwood of the University of Missouri, and Mrs. Spencer of the University of Wisconsin, for their papers; to Dr. Bishop for her services as Chairman of the Child Welfare section; to Superintendent Blewett of the St. Louis Public Schools for his address of welcome; to Dean Charters of the University of Missouri, Mr. Veiller, Secretary of the National Housing Association, Professor Mann of the University of Illinois, Dr. Rubinow, U. S. Department of Commerce and Labor, and Mr. Lebovitz of the Library of Congress, for addresses and papers before the Association; and to the officers and members who had in charge the arrangements for the convention, and to all who contributed to the program.

Program Committee:—The President was instructed to designate a Committee on Program which shall have entire charge of the program of the succeeding meeting. It was requested that suggestions regarding programs be sent to the President in advance of the annual meetings.

Committee on Child Care:—The report of the Committee on Child Care was received and with it a recommendation from the sectional meeting on child welfare requesting the continuance of the committee and urging that it pursue its investigation not only into professional courses in training, but also examining the possibilities of non-professional instruction in elementary schools, high schools and colleges. The thanks of the Association were tendered the committee for the survey of the field which they have prepared and the committee was continued.

Election of Officers:—The Nominating Committee, through H. C. Sherman, chairman, presented the following nominations for terms of one year: President, Miss Isabel Bevier, University of Illinois, Urbana, Illinois; First Vice President, Dr. C. F. Langworthy, U. S. Department of Agriculture, Washington; Second Vice President, Mrs. Mary Schenck Woolman, Teachers College, New York City; Third Vice President, Miss Martha Van Rensselaer, Cornell University, Ithaca, N. Y.; Secretary-Treasurer, Dr. Benjamin R. Andrews Teachers College, Columbia University, New York City. For terms of five years, members of the Council, Mrs. Ellen H. Richards, Massachusetts Institute of Technology, Boston, Mass.; Miss Marion Talbot, University of Chicago, Chicago, Illinois; Miss Mary Urie Watson, MacDonald Institute, Guelph, Ontario, Canada; Miss Adelaide Nutting, Teachers College, New York City; Miss Ednah Rich, State Normal School, Santa Barbara, California; and for member of the nominating committee, Miss Susanna Usher, University of Illinois, Urbana Illinois.

These nominations were accepted and the nominees duly elected. The convention then adjourned, *sine die.*

MEETING OF THE COUNCIL.

MINUTES OF THE MEETING OF THE COUNCIL OF THE AMERICAN HOME ECONOMICS ASSOCIATION, AT 10:30 A.M., DECEMBER 27, 1910, AT THE W. T. HARRIS TEACHERS COLLEGE, ST. LOUIS.

In the absence of a quorum no formal business was transacted; but a discussion of the business of the Association was had, and recommendations were made to the annual business meeting of the Association.

The report of the Editor of the JOURNAL OF HOME ECONOMICS was read. A proposal to begin the volume of the JOURNAL in the fall instead of January 1 was referred to the Executive Committee of the Association.

The provisional action of the Executive Committee in separating the dues from the subscription to the JOURNAL was discussed and the recommendation was made to the annual meeting that the amendment to the constitution providing for the separation of dues and subscription be adopted. On motion it was voted that in the opinion of those present the dues of the Association should be increased beyond the $0.25 amount provisionally adopted by the Executive Committee.

It was recommended to the annual meeting that the Executive Committee be authorized to make any adjustment with regard to subscription rates, advertising, clerical assistance, and other matters concerned with the publication of the JOURNAL.

The matter of financial arrangements with regard to clerical assistance for the Editor of the JOURNAL OF HOME ECONOMICS and in connection with the subscriptions to the JOURNAL and the membership dues was discussed, and it was recommended to the Association that the Executive Committee be empowered to make suitable arrangements with regard to editorial assistance, clerical assistance with regard to subscriptions, and clerical assistance with regard to dues of the Association, and that the person so charged with work for the Association be authorized to act as an Assistant Treasurer of the Association under the direction of the Treasurer.

The report of the Graduate School of Home Economics was made through Dr. Langworthy, and on motion it was recommended to the annual meeting of the Association that the Association should take over the Graduate School of Home Economics as a division of the work of the Association.

The matter of committees to serve during the convention was discussed and at a subsequent session of the Association, the President of the Association announced the following temporary committees: *Committee on College Entrance Requirements:* Miss Jennie Snow, Miss Edna Day, Miss Louise Stanley; *Committee on Legislation:* Miss Rosa Bouton, with power to add others; *Committee on Finance:* Miss Isabel Ely Lord, Miss Anna VanMeter, Dr. C. F. Langworthy; and *Committee on Resolutions:* Mr. Maurice LeBosquet, with power to add others. These committees were asked to report at the annual meeting of the Association.

REPORT OF THE SECRETARY.

Membership: The membership of the Association is now approximately 1500 as against 700 when the Association was organized in 1908, and 1250 one year ago at the time of the Boston Convention. The Executive Committee in November made effective the proposal considered at the Boston Convention to separate entirely the membership fee of the Association from the subscription to the JOURNAL OF HOME ECONOMICS. As a tentative arrangement the subscription to the JOURNAL was placed at $2, and the membership fee at $0.25, subject to final action by the Association at this Convention. The decision in November became necessary to meet the regulations of the Post Office Department, and the authority was based upon the action taken at Boston which referred the matter to the Executive Committee and the editorial board with power. What the outcome of this division of dues from membership will be upon membership of the Association and the subscription list of the JOURNAL cannot be foreseen.

Publication of the Journal:—The JOURNAL OF HOME ECONOMICS has been issued as a bi-monthly in five issues, with an extra sixth number in November reporting the conference on institutional management at Lake Placid. Contributions for the November issue were sought outside of the regular funds of the Association. Details regarding the JOURNAL are presented at length in the editor's report.

Duties of Secretary and Treasurer:—At the beginning of the Association one person performed the duties of secretary, treasurer, and editor. After six months the editorial work was transferred to another person while the secretary continued to care for the business records of the Association including the collection of dues and subscriptions. This situation continued through the first year and until the spring of 1910, when it seemed wiser to transfer the entire collection of dues and subscriptions to the Editor's office. This left to the treasurer certain duties involving the depositing of funds and the making of all payments. The experience of 1910 proved that it was impossible for a person undertaking the editorial duties as a piece of voluntary work also to carry the burden of the records of the Association, including care of card catalogues, the collecting and sending out bills, and the collection of dues and all the other details of the business side of the Association. It had already been found necessary to provide the editor with editorial assistance in the preparation of material for the press, in proof-reading, and in seeing the successive numbers through the printer's hands, and in November, 1910, the editorial board transferred the card catalogue and all business matters connected with the collection of dues, into the same hands, this action being of course subject to review and definite approval by the Annual Meeting of the Association.

Despite the withdrawing of these duties from the secretary's office it is evident that the growth of the Association makes necessary a further sub-division in the duties of the secretary and the treasurer. The secretary therefore recommends that the two offices be divided when proper constitutional action has been taken, and that the office of treasurer be established. This will leave the secretary's

office charged solely with the duties of correspondence during the year, and with secretarial duties at the annual meeting, a field extensive enough, however, to engage the best service which a voluntary official can give.

The Conventions:—The Association held two sectional conventions during the summer of 1910, one with a program of educational topics at the Boston meeting of the National Education Association, under the chairmanship of Miss Kinne of Teachers College; the other a section on household administration at the Lake Placid Club with a program on problems of institutional work, planned by a Committee composed of Mrs. Dewey of Lake Placid, Miss Nutting of Teachers College, and the Secretary of the Association. Both meetings were very successful. Several problems arise: (1) The Administration Section formed an organization with sectional officers, and its executive committee requests that we make formal provision for an Administration Section within the American Home Economics Association. (2) The Education Section did not form a permanent organization. There remains the question, however, whether an Education Section should not be formed parallel to the Administration Section. (3) The question of sections and their meetings is intimately involved in the question of the annual meetings of the whole Association. More than one meeting a year does not seem satisfactory. The Administration section makes a recommendation for 1911 that a summer meeting be held at which there shall be opportunity for sectional programs on administration, etc., and as well, general sessions. (4) Definite provision should be made as to the method of organizing programs. This has fallen up to the present upon the president or the secretary and such vigilance committees as it has been possible to organize. Definite arrangements for locating responsibility for programs should be provided for by this convention.

Affiliated Societies:—The affiliation of societies with the American Home Economics Association goes on apace. Societies have been organized in New York, Ohio, and Iowa during the past year, an organization is being formed in the Rocky Mountain States, and one is contemplated in Texas. The matter of the relationship of the Association to these local societies needs careful attention. Our Committee on Affiliated Societies offers one method of procedure. The problem involves not alone societies formerly affiliated with our Association, which in a way may be expected to take care of themselves, but the more pressing question of assistance which we can give to the women's club organizations, and our relationship to other societies, like the Infant Mortality Association, the Mothers' Congress, etc., which are in some way related to our field of interest. For the next year a possible policy would be to center our attention upon assistance to the women's clubs. Under affiliation should also be noted the fact that the Association took out membership in two international conferences in connection with the Brussels Exposition, the conference on Home Education in August, to which the President and Secretary of our Association contributed papers; and the Association on Hygiene and Alimentation and the Rational Feeding of Man, for which Dr. Langworthy collected a number of American papers, making the representation of American workers in nutrition one of the best. Dr. Langworthy attended the conference as a Government representative, and other members of our Association were present, though we had no official delegate.

Legislation:—Domestic science instruction is encouraged in certain states by legislation favoring its introduction into public elementary and high schools.

Our Association should gather the facts on this situation and urge the adoption of similar legislation in other states. Higher education in Home Economics received a great impetus during 1910 through the appropriation by the state legislature of New York of $154,000 for a Home Economics building at Cornell University. Congress is again considering the Dolliver bill which embodies the original Davis bill for agricultural and Home Economics education; also the proposal of the U. S. Bureau of Education for an appropriation to provide a specialist in education for housekeeping on the staff of the Bureau. The Association has already taken action approving the Davis bill. The proposal of the Bureau of Education should have earnest consideration by this convention. This Association ought to throw strong and country-wide influence in favor of good legislation and against vicious proposals in its own field of work. The state associations may be relied upon to watch state legislation, and it is surely the duty of the American Home Economics Association to further suitable federal enactments.

BENJAMIN R. ANDREWS, *Secretary.*

REPORT OF THE TREASURER.

The treasurer presented (1) a statement of the cash account for the year ended December 23, 1910; and (2) a statement of resources and liabilities on December 23, 1910.

I. CASH STATEMENT.

December 23, 1909, to December 23, 1910.

Receipts.

Cash balance	$ 192.63
Dues and subscriptons	3190.06
Contributions for Administration Section Fund	49.90
Total	$3432.59

Expenditures.

JOURNAL	$1816.65
Postage and stationery	200.76
Conventions	394.48
Pamphlets	23.20
Incidentals	31.00
Bank charges	12.60
Transfer to permanent fund	150.00
Charge against Administration Section fund	20.00
	$2638.69
Cash on hand	793.90
	$3432.59

II. Statement of Resources and Liabilities.

Resources.

Balance in general fund	$764.00
Balance in administration section fund	29.90
Advanced payment on bills for 1911	50.78

Accounts Receivable.

Dues of 90 members	180.00
For Journals sold	52.50
Inventory of Journals on hand	500.00
	$1577.18

Liabilities.

Printing Journals	$731.60
Clerical assistance	93.16
Programs for the St. Louis Convention	40.00
Subscriptions (224) for 1911, paid in advance	400.00
Dues (53) for 1911, paid in advance	14.50
Total	$1279.26
Credit balance	297.92
	$1677.18
Permanent fund, three life memberships	$150.00

Benjamin R. Andrews, *Treasurer.*

PROGRAM OF THE THIRD ANNUAL CONVENTION, AMERICAN HOME ECONOMICS ASSOCIATION.

ST. LOUIS, DECEMBER 27–30, 1910.

TUESDAY, DECEMBER 27.

9:00 a.m. Meeting of Executive Committee.

10:30 a.m. Meeting of Council.

Opening Session:

2:00 p.m. Welcoming Address: Superintendent Blewett, St. Louis Public Schools.

Address: The Effect of the Point of View in Teaching Domestic Science. Dean W. W. Charters, Teachers College, University of Missouri.

3:00 p.m. Section Meeting: Home Economics in Elementary Education. Mrs. Alice P. Norton, University of Chicago, Chairman.

1. Some Problems in the Elementary School. Miss Mildred Weigley, De Kalb Township High School, Ill.
2. From the Standpoint of the Grade Teacher. Miss Melva Latham, University Elementary School, University of Chicago.
3. The Effect on the Home. Miss Charley Tidd, University of Missouri.

3:00 p.m. Section Meeting: Chemistry and Dietetics. Miss Edna D. Day, University of Kansas, Chairman.

1. Research Papers, Abstracts and Titles: Further Contributions on Jelly Making. Miss N. E. Goldthwaite, University of Illinois.

(2) A Study of Flavor of Meat. Miss Elizabeth Sprague, University of Chicago.

(3) Studies in Methods of Food Preparation. Miss Elizabeth Sprague, University of Chicago.

(4) The Proportion of Flour in its Relation to Certain Characteristics in Bread. Misses Ida Shilling and Frances Freeman, University of Ohio.

(5) The Leavening Agent in Salt-rising Bread. Miss Winona Woodward, University of Missouri.

(6) Changes in the Phosphorus Compounds of Meat During Cooking. Miss Louise Stanley, University of Missouri.

(7) The Nutritive Value of Seaweeds. Mrs. Mary D. Swartz Rose, Teachers College, Columbia University.

(8) The Erepsin of the Cabbage. Miss Alice F. Blood, Simmons College.

(9) Recent Literature on Metabolism in Typhoid. Miss Josephine T. Berry.

(10) Losses in Cooking Green Vegetables. Miss Josephine T. Berry.

(READ BY TITLE ONLY.)

(11) The Cooking Properties of Potatoes as Influenced by Varieties and Methods of Storage. Miss Fern Boll, University of Wisconsin.

(12) The Use and Preservation of Cranberries, Fresh and Stored. Miss Grace Howe, University of Wisconsin.

(13) The Effect of Pasteurization of Milk on the Cooking Properties of Cheese Made from It. Miss Lottie Wilkinson, University of Wisconsin.

(14) Dietaries Furnished in Tuberculosis Sanitariums. Miss Roxie Yorgey, University of Wisconsin.

(15) Inversion of Sugar in Various Household Processes. Miss Mary Edmonds, University of Ohio.

2. Review of Progress in Nutrition. Dr. C. F. Langworthy, U. S. Department of Agriculture, Washington, D. C.

8:00 p.m. *Wednesday Club Auditorium.* Public meeting with addresses. Members of Women's Clubs especially invited. Speakers: Mrs. Philip N. Moore, President General Federation of Women's Club; Mrs. Ellen H. Richards, President American Home Economics Association, and others. An informal reception followed the meeting.

WEDNESDAY, DECEMBER 28.

9:30 a.m. General Session: Administration Section. Miss Lydia Southard, Teachers College, New York City, chairman. Household Service as a Labor Problem. I. M. Rubinow, U. S. Department of Commerce and Labor. Some Social Economic Aspects of Labor Saving Machinery in the Household: J. Lebovitz, Library of Congress.

10:30 a.m. Section Meeting—Management. Economic Values of House Work, John Leeds, Teachers College, New York. Thrift in the Household from the European Standpoint: Mrs. Edith Talbot Jackson (presented in absentia). A Basal Ration, with Extras at Additional Cost,—as employed in the Yale College Dining Hall: Miss Josephine T. Berry, Yale University. The Use of a Residence Hall in Training Students in Management: Miss Martha T. Bell, College of Industrial Arts, Denton, Texas. At an adjourned meeting at 11 a. m. Thursday, the Administration Section considered the report of a Committee on Courses of Study in Administration.

10:30 a.m. Section on Instruction in Food Preparation and Dietetics. Miss Edna D. Day, chairman.

Methods of Teaching Dietetics.

Mrs. Mary Pierce Van Zile, Kansas Agricultural College. Miss Ruth Wardall, Ohio State University. Miss Louise Stanley, University of Missouri.

Methods of Teaching Preparation of Food.

Miss Jennie Snow, University of Chicago. Miss Nellie Nesbitt, University of Missouri. Miss Nina B. Crigler, University of Illinois. Miss May B. Van Arsdale, Teachers College.

1:00 p.m. Annual Luncheon, with informal addresses and roll-call.

3:30 p.m. Section on Child Welfare. Address by Frances L. Bishop, M.D., St. Louis, chairman of section.

1. Report of Committee on Education for the Child-Nurse, Adelaide Nutting, Teachers College, New York, chairman, presented by Mary L. Read, of *The American Baby Magazine*, New York.

2. Instruction on Child-Care.

(1) In the Elementary School. Papers, in absentia, by Mrs. Mary E. Williams, Supervisor of Domestic Science, New York City Schools, and Miss Mary Wright, Director of Household Economy, Public Schools, Philadelphia.

(2) In the High School. Miss Ella Henry, Supervisor of Domestic Science, Manual Training High School, Denver.

(3) In the College. Miss Edna D. Day, University of Kansas.

3. Emphasis to be Given on the Care of the Normal Child. Mrs. Henrietta W. Calvin, Purdue University.

4. Research.

(1) Glycosuria in Infants and its Relations to Infant Feeding. Louise Stanley, University of Missouri.

(2) The Significance of Curds in Infant Stools. Amy Louise Daniels, Yale University.

8:00 p.m. Aspects of Economics of Importance in Household Science. David Kinley, Professor of Economics, Dean of Graduate School, University of Illinois. Discussion: Frank A. Fetter, Professor of Political Economy and Finance, Cornell University.

THURSDAY, DECEMBER 29.

9:30 a.m. General Session. Housing and Sanitation. Miss Isabel Bevier, University of Illinois, Urbana, chairman.

1. Housing Reform. Lawrence Veiller, Secretary, National Housing Association.

2. The Moderate Priced House, Professor R. M. Mann, Head of Department of Architecture, University of Illinois. (Illustrated.)

11:00 a.m. Section Meeting. Housing and Sanitation.

1. Some Results of Investigation as to Household Equipment. Helen Louise Johnson, Good Housekeeping Magazine, Springfield, Mass.

2. Courses of Instruction on Housing and Sanitation.

11:00 a.m. Administration Section. Report of Committee on Courses of Study in Administration.

1:30 p.m. Annual meeting of the Association. Reports of officers to the Association. Reports from Committees. Recommendations from the Council. Report of Election Committee and Election of Officers.

4:00 p.m. Methods of Extension Work. Miss Rosa Bouton, University of Nebraska, chairman.

1. Methods of Presenting Extension Work. Miss Neale S. Knowles, Ames, Iowa; Miss Ilena Bailey, University of Missouri.

2. Opportunities and Limitations of Household Economics Departments in Rural Extension Work. Mrs. Henrietta W. Calvin, Purdue University.

3. What the Women's Clubs Are Doing. Mrs. Olaf N. Guldin, chairman. Home Economics Committee, Federation of Women's Clubs.

8:00 p.m. What Courses in Sociology—Pure or Applied—Should Be Included in a College Department of Household Science? Professor George Elliott Howard, University of Nebraska. Discussion: Professor Charles A. Ellwood, University of Missouri.

FRIDAY, DECEMBER 30.

9:30 a.m. Instruction in Economics in High Schools, Mrs. Norton, University of Chicago, chairman.

1. The Training of High School Girls as Intelligent Consumers. Miss Agnes K. Hanna, University College, Chicago.

2. The Development of Individual Responsibility through a Study of Social Problems. Miss S. P. Breckenridge, University of Chicago.
3. How the Individual Home Economist May Help General Economic Progress. Professor William Morse Cole, Harvard University.

11:00 a.m. Section on Textiles. Miss Abby Marlatt, University of Wisconsin, chairman.

The Content of the Course of Study in Textiles. Miss Nellie Crooks, Milwaukee-Downer College. Discussion by Miss Charlotte Gibbs, University of Illinois, and Miss Van Hoesen, Chicago University.

Textile Experimentation. Miss Agnes Houston Craig, College of Industrial Arts, Denton, Texas.

The Value of a Course in Historic Costume for the Domestic Art Curriculum. Miss Jane Fales, Professor of Textiles and Clothing, Teachers College, New York.

Textile Testing Laboratory for U. S. Army. Miss Florence Winchell, Teachers College, New York.

A Study of Bluings. Miss L. Ray Balderston, Teachers College, New York.

Some Textile Tests, in connection with an Educational Exhibit. Grace Denny, Teachers College, New York.

12:30 p.m. Luncheon at Teachers College.

1:30 p.m. Instruction in Home Economics. Miss S. P. Breckenridge, University of Chicago, chairman.

1. Knowledge of the Productive System as a Preventive of Waste. Miss Anna R. Van Meter, University of Illinois.
2. Knowledge of the Industrial System as a Basis for Consumer's Responsibility. Miss Edna D. Day, University of Kansas.
3. Cost Accounting. Mrs. Ellen H. Richards, Massachusetts Institute of Technology.

Discussion. Miss Marion Talbot, University of Chicago.

4:30 p.m. Reception to Mrs. Ellen H. Richards, the President of the Association, by the Wednesday Club, at the Club Parlors.

REPORT ON COLLEGE COURSES IN HOME ECONOMICS.[1]

After considerable study of the condition of instruction in Home Economics in the colleges your committee has decided that what is most needed at present is a reasonable standardization of the regular courses in this subject leading to a bachelor's degree, and the planning of college courses which will meet the rapidly growing demand for practical instruction in this subject and which will not sacrifice reasonable standards of collegiate instruction. Entrance requirements which the preparatory schools are now unable to meet should not be insisted on, but at the same time those schools should be encouraged to introduce Home Economics courses.

Recognizing that the determination of courses of instruction in Home Economics should lie primarily with the teachers and experts in this subject, your committee asked the American Home Economics Association to appoint a committee for conference with us. This was done at the meeting of that Association in Boston in January, 1910. Their committee includes the following: Prof. M. E. Jaffa, of the University of California; Dr. Edna D. Day, of the University of Kansas; Mrs. Mary P. Van Zile, of the Kansas State Agricultural College; Miss Ellen A. Huntington, of the Utah Agricultural College; and Miss Isabel Bevier, of the University of Illinois.

The chairman of your committee had a personal conference with members of their committee in Chicago last June, and in this way and by correspondence the following report has been prepared as representing the views of both committees.

The college courses of study especially arranged for women will naturally include branches outside of what may strictly be defined as Home Economics. Students taking Home Economics courses leading to a bachelor's degree should be required to take other groups

[1] This report was presented to the Association of American Agricultural Colleges and Experiment Stations, by its standing committee on instruction in agriculture, at Washington, D. C., Nov. 17, 1910. The personnel of this committee is as follows: A. C. True, chairman, T. F. Hunt, H. C. White, H. J. Waters, W. E. Stone, and J. F. Duggar.

of subjects having more or less direct relation to the life of men, women and children in the home and in the community. Such, for example, are courses in personal physiology, hygiene and medicine, principles of education, sociology, library science, and others which in some colleges for convenience have been associated with the Home Economics department. It is desirable that Home Economics should be made a well-defined subject of reasonably limited range. For this reason our report begins with a definition of Home Economics.

Home Economics, as a distinctive subject of instruction, includes the economic, sanitary and esthetic aspects of food, clothing and shelter as connected with their selection, preparation and use by the family in the home or by other groups of people.

Instruction in this subject should be based on scientific principles and graded according to the maturity, attainments and purposes of the student.

As in the case of other subjects, courses of instruction in Home Economics should be divided into general classes suited to the respective requirements of elementary and secondary schools, normal schools, colleges and universities.

In colleges and universities the work in Home Economics will naturally be pursued in three main divisions—research, interior instruction, and exterior instruction or extension work. The interior instruction may be given to undergraduates and graduates. With the development of collegiate instruction in Home Economics a variety of special courses will be offered in the larger institutions, and the students will thus be given opportunity to specialize according to their particular aims, as, for example, if they intend to become housewives, teachers, nurses, physicians, managers of hotels or public institutions, etc.

At present it is desirable to set up and maintain a reasonable standard for undergraduate college courses in Home Economics, leading to the bachelor's degree. This paper will be confined to the consideration of such courses.

Standard undergraduate college courses in Home Economics should be arranged with reference to students who have had the equivalent of general education covering the grades in the elementary schools and four years in the secondary school. If possible, students intending to take courses in Home Economics in college should study this subject at least two years in the secondary schools and receive credit for this on entrance to college.

It is, however, recognized that under existing conditions many of the students desiring to pursue Home Economics courses in our colleges cannot receive instruction in this subject in the preparatory schools available to them. It is, therefore, recommended that college courses in Home Economics be arranged to meet the needs of such students, without requiring them to prolong the time needed to satisfy the college requirements for the bachelor's degree.

All courses in Home Economics should be developed with an orderly and carefully graded sequence of subjects and topics. They should also take into account that the study of the theory of the subject, including especially the scientific principles involved in it, is intended to give a rational basis for an efficient practice and that the student has not mastered the subject until she is able to practice the art as well as expound its theory.

The general scheme of instruction should involve (1) the presentation of the subject in concrete form, with accompanying practice, (2) the development of the principles involved, with laboratory practice, and (3) the application of these principles in a rational system of practice more advanced in type, with opportunities for devising new methods of practice and for experimental work.

The standard undergraduate college course in Home Economics leading to a bachelor's degree should include the following subjects:

Required Subjects.

1. Home architecture and sanitation.
2. Home decoration.
3. Textiles.
4. Selection and preparation of food.
5. Economic uses of food.
6. Household management.

Subjects from which choice must be made.

7. Advanced cooking. Dressmaking or millinery. Art needlework. (At least one of this group.)
8. Dietetics. Food and nutrition. Art in the home. (At least one of this group).

Such other electives in Home Economics as the college can offer.

The order of presentation suggested above is not essential, but the subjects should be taught in some definitely related order.

For students who have not had instruction in Home Economics in preparatory schools the following minor college course is suggested to be required of candidates for a bachelor's degree:

1. Plain sewing and garment making.
2. Cooking.
3. Home architecture and sanitation.
4. Home decoration.
5. Textiles.
6. Selection and preparation of food.
7. Economic uses of food.
8. Household management.

College students taking either of these courses in Home Economics should be required to add to them such groups of studies in mathematics, languages, science, economics, sociology, principles of education, etc., as will make their whole college course a well rounded scheme of liberal education, comparable with the degree courses in other lines, and at the same time contribute to the thoroughness of their work in Home Economics. Students taking the minor course in Home Economics might be allowed to elect additional work in Home Economics during the latter part of their college course.

Short courses and extension courses, not leading to a degree, should be arranged for separately and are not taken into account here.

A UNIVERSITY STANDARD IN HOME SCIENCE.[1]

In connection with the Women's Congress, which was held in the Congress Hall of the Japan-British Exhibition at Shepherd's Bush, England, a discussion was held June 8, on the subject of A University Standard in Home Science.

Lady Rücker, who presided, explained the purpose of the congress. At the British Association meeting at York, Professor Smithells had suggested that women were managing their own education so badly that they should leave it to men to say what women's education ought to be. Professor Smithells' humorous suggestion was perhaps one of the first public expressions of a conviction that had been steadily growing in many minds and this meeting showed that women were ready to take up his challenge to prove that they were only too anxious to advance along the path of educational progress. The scientific discoveries of the Victorian era had necessarily brought great changes into the school and university education of boys and men, but women's energies had, until recently, been so absorbed in getting the doors of the universities opened to them that they had perforce been obliged to follow the beaten track of the curriculum.

Having proved their capacity to become as highly educated as men, women were now able to raise a further claim, the claim that the time had come when the universities should recognize that training for one more profession should be admitted within their walls—the profession of household administration. The need for efficiency in technical affairs had forced the educational authorities to give degrees for the professions of law, medicine, engineering, veterinary surgery, and agriculture. Was it therefore too much to hope that the university would go a step further and recognize that inefficiency in women was as great a danger to the State as quackery in medicine? Would not our descendants look back with astonishment to the dark ages when girls undertook to be wives, mothers, or housekeepers with no technical training, and in consequence wasted their substance, their health, and alas too often their own and their children's lives in the sad costly school of experience through mistakes?

[1]From *Education*, July 2, 1910.

It was efficiency that we required in our women as in our men. The country was doing much to educate the poorer classes. The country councils were making splendid efforts and polytechnics were providing admirable classes But to get the best teaching we must have teachers with a university diploma and the subjects of Home Science and Economics required research students for many problems. It is impossible to reach the ideal that every woman should have a training to equip her for home life before she is considered fit to leave school until the universities make it possible for the girls' schools to give this teaching by providing the teachers and by giving the encouragement of their examinations. This in brief was the history of the rise of the movement to secure a university standard in home science.

The work has already taken definite shape and for the last two years King's College for Women has thrown open its doors and lent its aid to carrying out the plan of giving education of a university standard with a college diploma to students in Home Science Economics. The experimental years had been most encouraging. Not only had an excellent class of students presented themselves for the three-year undergraduate course of training, but a number of women who had already taken high degrees had entered for the one-year postgraduate course also given in the college, and some were entering upon interesting problems in research. Posts had been forthcoming at once for the students who had taken the college diplomas and it was hoped that the conference that day might lead to a wider recognition of the need of their training and of its admission to the curriculum of our universities.

Mrs. St. Loe Strachery, who gave the opening paper on The Ideals of Home Science, prefaced her remarks by a message to the congress from Theodore Roosevelt, to whom, knowing that the subject was one in which he was interested, she had described their aims and objects and had outlined roughly the scheme of the courses at King's College. Mr. Roosevelt gave his warmest approval and sympathy to the movement, and added that he was of the opinion that it was an urgent necessity that a university standard should be established in its teaching.

Mrs. Strachey defined a "university standard" as meaning the attainment in a student of such a standard of knowledge as would be rewarded by the grant of a degree if it had been attained in a subject in which our universities examined for a degree. In the special courses

in home science which were being held at King's College for Women the teaching might claim to attain to a university standard. The students were not allowed to be content with merely acquiring a knowledge of the technical processes carried on in the practice of domestic science, but were required to study at first hand the various scientific principles which underlie the proper conduct of a house or institution and the bringing up of the young. Quoting one or two examples from the syllabus, the speaker pointed out that the study of physics and sanitary science would be of use in the care of the fabric of a house. Applied chemistry had many lessons to teach which would be useful in those thousands of most unscientific laboratories, the kitchens of Great Britain, in preventing waste and improving the physical condition of the people. It was true that women in our universities had for many years past studied physics, chemistry, biology, bacteriology, and, indeed, the whole list of sciences mentioned in the syllabus, but the point on which she wished to lay stress was that these subjects should be studied in a definite coördinated course, having for its object "to provide a scientific education in the principles which underlie the whole organization of home life."

In conclusion, Mrs. Strachey drew attention to the immense field of what she called "vicarious motherhood." All women who were in any way concerned with the care and training of the young were vicarious mothers, including that great army, the women teachers in our elementary and secondary schools. Should we not expect that their attention would be progressively directed throughout the whole course of their training to the scientific principles which underlie the physical, mental, and moral development of their future charges? Yet this could not be done unless the teaching of home science were carried to a university standard.

The Duchess of Hamilton said that, even when no practical work had been done technical knowledge made mistresses able to sympathize with and understand their employees, have better control over them, and, in consequence, have all work better done than if the day was gotten through in a merely slipshod manner. On the other hand, it induced a more practical interest on the part of employees, and more efficient service. Upon the girls of the upper classes rested the responsibility of the future home life of Great Britain, and to a great extent the progress of the empire. Queen Mary was cited as an ideal example of one who had studied deeply and took a lively interest in all branches of knowledge, not forgetting to give the science of home life its proper place.

Miss Oakely, warden of the Women's Department of King's College, speaking on Home Science and Higher Culture, said the new movement met the spirit of the age in its insistence that science should be everywhere, that reason should occupy all spheres, and that there should be no dark corners left; yet in meeting it they brought something of their own, something that women had learned in the long history of their demand that their highest faculties should be used in the highest ways. Home science, however great its interest as a science, must be a thing of the spirit, a thing pursued not merely as a means of health, safety, and comfort, but also as a measure of regeneration.

Miss Faithful, principal of Cheltenham Ladies' College, who spoke on Home Science for Senior Girls pointed out that the movement was not confined to England, but was widespread in America and Germany. The schools of England were in favor of the movement. and the conversion of the headmistresses had been one of its most striking features. She held the view that senior girls should be definitely taught some science. There was a danger that girls from the ages of 15 to 18 would develop the romantic faculties to the exclusion of all else, and the subject of home science offered a very great counterpoise.

Mr. Y. Tadokoro, who is attached to the Ministry of Public Instruction in Tokio, spoke on the advance of female education in Japan. As there were fewer women than men, the proportion being 97 women to every 100 men, nearly all women married, and all the schools aimed at teaching the girls to be good wives and mothers.

Mrs. Sidgwick, principal of Newnham College, was the last speaker. She said she approved of the home science courses but thought the title misleading and mischievous, preferring home arts and domestic arts to home science.

WHAT COURSES IN SOCIOLOGY, PURE OR APPLIED, SHOULD BE INCLUDED IN COLLEGE DEPARTMENTS OF HOUSEHOLD SCIENCE?[1]

GEORGE ELLIOTT HOWARD, Ph.D.

Head Professor of Political Science and Sociology, University of Nebraska.

It is highly significant that the question to-day put to me should now be deemed expedient by this Association. It means that already, after an astonishingly short probation, the youngest of the new disciplines is before the college council seeking the just terms, the right basis, of admission to full academic privilege. It implies in that our country the hour has come seriously to consider the organization and standardization of superior instruction in the field of household science.

Household Science as a Liberal Education.—Naturally the vital problem of proper specialization is the first to arise. If a college department of household science is to provide a liberal education, equivalent to that afforded by the older disciplines, how shall its program of studies be composed? With the distinctive technical studies in household science as a "major"—to use current professional phrase—what other subjects as "minors" should be combined so as to secure a culture at once deep enough and broad enough for social efficiency? Now, it ought not to be so hard as it was a few years ago to reach an agreement on such a program. Happily we are perceiving more clearly than formerly the real harm of too narrow specialization, of too short scientific vision. In academic study, we are learning to distrust a specialization so minute, so confined, as often to produce mental sterility. We are coming to realize that there is such a thing as *breadth for the sake of depth.* This is decidedly true in the wide domain of the social sciences. The sociologist must know a good deal of economics, of history, of psychology, in order to be a sound sociologist; the economist must have a broad knowledge of sociology and of history, if he would get a firm grip on economics; while history

[1]A paper read at the St. Louis Meeting of the American Home Economics Association, December 29, 1910.

is too apt to prove a barren waste of mere events unless it be illumined and vitalized through economic interpretation and the constant recognition of social causation. Doubtless the perennial discussion of the interrelations of sociology and the other social sciences is not without real value. The endeavor to find boundaries is inevitable while a young and ambitious body of learning is in the "analytic" stage and striving to become "synthetic"—to get recognition as a legitimate member of the scientific family.

How Much May the Social Sciences Overlap?—Still, is there not danger of exaggerating the importance of running exact boundary lines? In actual research the main thing is to reach the truth, whatever fence has to be crossed. As a practical rule of specialization, I venture the suggestion that no fixed limits need be set as to the degree in which the overlapping of the departmental areas of the respective social sciences is permissible. Perhaps such overlapping should be in direct ratio to the intensiveness of the particular study or investigation. Probably, as a working guide it may be affirmed that the *results*—the laws, truths, generalizations—obtained in each science are available in all, while the *processes* are not; though even in the latter respect a fixed limit would often prove a hindrance to the free handling of materials. The sociologist, for instance, will normally give due faith and credit to the historian's conclusions; but in a given case, if the historian has neglected the intensive work which the sociologist needs, or has not done it well, the sociologist perforce must turn historian and perform the task for himself as best he can. By the same token, as some of you have found out, the sociologist, by neglecting intensive work, may shift his own proper task to the shoulders of the household scientist.

That sociology should fill a large space in the curricula of college departments of household science might be taken for granted, were it not for the facts disclosed by their published announcements. These reveal a surprising progress in the differentiation of the technical or professional studies peculiar to that science. Even in the smaller or younger institutions the student finds in the courses dealing with foods, shelter, clothing, personal hygiene, household administration and the like a rich feast spread before him. The progress already made on this side of the science deserves the highest praise. On the other side, the side of the supplementary studies needed to place these departments on a proper college basis, the showing is not so encouraging. Here and there courses in sociology are prescribed or made

elective; but generally in the list of subjects required for a degree the conventional technical studies are supplemented by almost anything, from Greek to religious knowledge, without reference to sociology. Yet, I dare affirm, if college graduates in household science are to become efficient, even safe, leaders in the art of right living and home-building, they must gain the catholicity of sympathy, the enlightened toleration, the breadth of moral vision, the penetrating insight into the social-psychic forces and processes which in each age and environment have moulded the type of the household; and these qualities can come only from an intimate acquaintance with sociology.

What is Sociology?—But that depends: What *is* sociology? Verily, that is the question which reaches the vitals of this hour's discussion. May I put before you my confession of faith? I have a profound distrust for that dry-as-dust sociology which spends its energy in fine-spun theorizing or in defending the legitimacy of its scientific birthright. Definition, theory, scientific construction lines have indeed each a rightful place in sociological thought, and they need not be entirely excluded from the seminar or even from the undergraduate classroom. Yet, has not the teacher who looks upon education as an equipment for social service a nobler, a more urgent duty to perform? Instead of trembling and vacillating lest he encroach on some other person's preserves, he will strive earnestly and bravely to put his science at the service of men.

Sociology as Social Service.—Sociology should be an explanation of human experience in social living. It should touch actual social life at every salient point. Often the day's lesson may best be vivified and realized from current events. The alert teacher is never in want of materials for his laboratory. The morning journal may give him just the examples which he needs to kindle the fruitful imagination and clarify the understanding of his pupils. Conceived of in this way, sociology becomes the most practical of studies. Moreover, the intemperate assaults of conservative pedantry and the anti-social interests suggest that sociology is "making good." The sociologist is fast becoming the accepted modern apostle of social righteousness, preaching and practicing the new gospel of saving humanism. There is no evading the plain fact that the great constructive work of moral progress is being done by the expert students of the realities of modern social life; by the trained and fearless minds which make our colleges and universities radiant centers of helpful and honest thought.

Now, sociology and household science are blood-kindred. But

for the risk of stirring the jealousy of the economists, I should be tempted to say that they stand in the relation of parent and child. For, at bottom, would it be a very extravagant conceit to say that household science is a division of applied sociology? At any rate, are they not in a position to render each other an important reciprocal service? If sociology at its best, such as I have hinted at, has something precious for household science, household science in turn, by demanding expert assistance, may stimulate sociology to play a larger and more efficient rôle in education.

A Holy Triad of Personalities.—Because of this close kinship, it becomes almost invidious to suggest courses in sociology for the special privilege of being accredited toward a liberal education in household science. It is hard to say which should be excluded. This is not surprising when one considers the history of the household. In some form, the household has always been the unit of social progress. Reflect on the vast spiritual or cultural content of the word! It connotes the trinity of institutions—three in one and yet one in three: marriage, family, and the home. It means the hearth where dwells the holy triad of personalities: father, mother, and child. What an endless stream of the social-psychic products that constitute human achievement has welled up and flowed out from the forces which dominate the household! What a host of the symbols, customs, modes, inventions, superstitions, beliefs, imperatives and ideals that rule the lives of men have been molded in the same social crucible! It will be a serious mistake, in planning a college education fit for the training of efficient leaders, if the more material factors of home-building—the economic, hygienic, or administrative factors, for instance—be isolated from the whole institutional or psychic life of the household. In a word, household science without sociology would be a body without a soul. In this ideal I feel sure of your sympathy; for is not your best literature illuminated by it? Are not those grand little books of your President (Mrs. Ellen H. Richards), for instance, from cover to cover inspired with the living spirit of dynamic sociology?

For convenience of analysis, in considering the aspects of sociology of most value for household science, courses in four general divisions of the field are suggested: pure or general sociology, social psychology, applied and historical sociology, and social anthropology. Throughout the list, the use of the comparative method is taken for granted; while it is not overlooked that the courses outlined may only be adopted in whole or in part, treated intensively or summarily, accord-

ing to the exigencies of each particular college. This evening, I take it, our purpose is to focus attention upon a definite program of sociological studies, so as to aid in eventually standardizing superior training in the related field. Now, the range of social phenomena is so vast that by judicious selection it seems possible to plan studies which, without sacrifice of scientific quality, may prove of unique value for our purpose. Accordingly, in some cases, the formal statement of a course is followed by a hint as to what accent of principle, what trend of discussion, or what choice of illustrative materials will render the subject most fruitful for household science.

Suggested Courses in Sociology.

Course I. *General Sociology: A Study of the Principles of Sociological Science.*—After a brief examination of the characteristics of sociology, including definition, subject-matter, and relation to other social sciences, this course investigates in turn the social population, the social forces, the social processes, and those social products or structures most important for understanding the household.

Such a course is of basic scientific value; and it will become intensely practical if vitalized through the expert choice of materials. Take, for instance, "social process," which Professor Ross well calls the "primordial fact," lying back of all social structures. It presents, as he suggests, a myriad aspects or varieties, corresponding to the countless interlacing "actions and interactions of men." Here is an opportunity to study social genesis, social causation. A form of marriage, a family type, a species of human dwelling, a domestic custom or implement, a household belief or superstition, each is a precipitate, a residuum, a product of social process, of "the quick cause before which," Emerson says, "all forms flee as the driven snows, itself secret, its works driven before it in floods and multitudes."

Back of the social processes lie the social forces—the wants or desires of men. Here is the motive-power, the electricity, the "dynamic agent," to use Professor Ward's term, which starts the social machinery and keeps social progress to its work. Consider the vast number and variety of the appetites, inclinations, ambitions, emotions, beliefs, and ideals which make up the surging mass of human wants or desires, the springs of individual and social action! Indeed, one hardly sees how sound or efficient training in the economics of the household can be attained without requiring a thorough study of the

desires as social forces. Desires fix the values which we give to things. In these latter days, the economists have done well to include in their treatises a discussion of the "consumption of goods." Yet the sociologist is especially equipped to throw a clear light on this subject. The philosophy of the desires carries us into the most secret councils of the domestic budget; it opens the hidden ledger of the family expenses and discloses the real motives determining the standard of living. For men consume, not according to their needs, but according to their wants; and their wants are of every sort: wise or foolish, frivolous or serious, pure or vile, base or lofty, selfish or altruistic, holy or unholy, in every possible combination. It will be a hard but worthy achievement if the teacher of household science shall be able to do somewhat to socialize human wants.

Back of social structure, social process, and social force, at the threshold of this course, is the social population. Experience has shown that the sociology of vital statistics is wonderfully fascinating to the student. In scarcely any other way can he gain so vivid a conception of the actualities of modern social life, or get so firm a grasp on the meaning of the new social service activities. The statistics of the urban density and growth of population, for instance, lead him directly to the housing problem, with the related problems of the slum, the sweat-shop, the factory, and child labor. The figures relating to marriage and divorce land him in the very heart of a many-sided social-ethical discussion whose interest centers in the family. Even more enlightening is the tragedy of the death-rate. The student is appalled when he first comprehends the wanton sacrifice of human life, the reckless waste of our vital resources, through ignorance, disease, and bad social condition. He shudders at the frightful mortality of the slum and the insanitary tenement whose dark and bloody actions are perennial in our great cities. Gradually he realizes that slaughter in war is not so deadly as institutional murder in times of peace; and so he comes to understand, contrary to the popular view, that the real race-suicide now threatening society consists chiefly, not in a falling birth rate, be the cause what it may, whether higher or lower ideals, but a death rate needlessly high. Then he turns to the triumphs of scientific prevention, and takes new courage. To his amazement he learns that there is actually being achieved a conquest of death; that in the occidental world since the coronation of English Elizabeth the average length of life has been more than doubled. Smallpox and yellow fever have been nearly routed; tuber-

culosis is on the run; and even the campaign to prevent insanity is already begun. A single flash of knowledge enables him vividly to see how much the life of man lies in his own hand. For recently Prof. Irving Fisher has calculated that proper care for pure water, pure milk, and pure air—the blessed trinity of health—would increase the average span of life in the United States by eight years.

COURSE II. *Social Psychology: An Investigation of the Chief Psychic Factors in Social Evolution.*—This course accents the varied aspects of suggestion—imitation and crowd psychology. It studies the laws of craze and sect, fashion and conventionality, custom and tradition, discussion and public opinion; and it considers the rôle of suggestion in household education.

Among teachers of experience the conviction is deepening that social psychology is by far the most practical, the most fruitful, division of sociological science. With wise selection, almost every lesson may touch the psychic life of the family. The unregenerate family is *par excellence* the stronghold of mob-mind. Where else is the tyranny of fashion, fad, and conventionality so severe? Where else do do custom and tradition hold more rigid sway? Where, in the Tardean sense, is there so much slavish imitation and so little invention as in household habit, economy, or administration? Where is the influence of suggestion so constant or so potent as in moulding the child's personality? Where else is undisciplined suggestion more harmful? On the other hand, when rightly disciplined or controlled, is it not likely that mental suggestion has a great and beneficent rôle to play in the future home education of the young? On this point, Dr. Sidis has recently made us all "sit up and take notice." Moreover, for the organization of such a course, there is already a large and growing monographic and serial literature. In particular, the books of Baldwin, Sidis, McDougall, Davis, Cooley, Ward, and Ross, with the vast storehouse of illustration provided by Tarde, have made comparatively easy the analysis of materials for academic study.

The two courses already suggested are fundamental. We may now invade the wide domain of historical and applied sociology.

COURSE III. *History of the Family and Related Institutions.*—1. Early history: Theories as to the genesis of marriage forms and family types; mother-right and father-right; polyandry, polygamy, and monogamy; wife-capture and wife-purchase; economic and religious influences on the rise of family institutions; types of clan and family dwellings. 2. Mediaeval history: Marriage and the family

under Teutonic customs and canon law; influence of the Reformation. 3. Modern history: Decline of paternal authority; individualization for the sake of socialization; growth of various forms of social control of the domestic relations; problems of marriage, divorce, and sex-education, the home and the industrial revolution.

Such a course, properly treated, is suitable for either graduates or undergraduates. Its literature is enormous and very hard to read. It may be supplemented by the following intensive study, for the construction of which I am especially indebted to the expert skill of my colleague, Dr. Lucile Eaves. It is so rich in the culture elements essential for our purpose that it alone might almost furnish a liberal education in the principles of social service. Possibly a very detailed analysis may prove helpful in planning the new college program in household service.

COURSE IV. *The Interrelations of the Home and Modern Social Betterment Movements.*—1. The fundamental importance of family life in all forms of social betterment. 2. The founding of the home: Significance of studies in eugenics and in sex-hygiene; social value of the legal regulations controlling marriage. 3. The selection of the dwelling: Tests of suitable sanitation; choice of social environment; agencies for assisting in the purchase of a home. 4. Social significance of the period of infancy: Individual and social gains due to the prolongation of infancy; infant mortality, its causes and prevention. 5. The social psychology of the home: Social lessons to be emphasized at different periods in the development of the child; systematic training in a sense of social responsibility; psychological value of the ceremonies of family life; systematic education in the psychology of sex. 6. The social hygiene of the home: Utilization of public health service; avoidance of infection; responsibilities in the protection of the community health. 7. Economic aspects of home life: Training for participation in the economic activities of family life; systematic teaching of thrift; responsibility of the home for the maintenance of improvement in the standard of living; social significance of typical family budgets. 8. Coöperation between the home and other institutions of the community: The home and the school; home and the church; home and voluntary social service clubs and leagues. 9. The breakdown of the home and the call for social control: Substitution of the juvenile court and the parental school; methods of dealing with dependent families; care of the homeless child; compulsory medical and sanitary inspection. 10. Recreational life of the home: New views about the sig-

nificance of recreation; ways of organizing and promoting the social life of the family; dangerous forms of recreation; the peril of child labor. 11. Utilization within the home of the cultural opportunities of the community: Use of municipal and state libraries; means of promoting art education; available information in government publications; ways of using parks, museums, etc. 12. Social and civic activities of the family: Ways in which children may be trained for social and civic duties; forms of social and civic work that could be carried out by the family group.

Such a course carries systematic education far into a neglected but fertile field. How many of the most fruitful activities of modern social life are ignored by the schools! Household science itself has come in response to the rising demand for the socialization of education. To aid in organizing and appreciating this movement, the next course is suggested. In substance, Professor Eaves is now giving it with excellent results in the University of Nebraska.

COURSE V. *The Social Training of Children.*—1. The demand of leading educators for more definite social training. 2. The development of the child in its relation to moral and social education. 3. What the school may do to explain and strengthen the social and economic life of the home. 4. Significance of the play of children. 5. Supervision of the social life of adolescents. 6. Critical examination of modern experiments in the moral instruction and training of children, including a study of (a) Dr. Dewey's former experimental school at the University of Chicago; (b) the school of the New York Society for Ethical Culture; (c) the work of the English Moral Instruction League; and (d) French courses of study and texts used in moral education. 7. Discussion of proposed plans and methods for promoting vocational training in the public schools.

Even so novel a course as this is not sufficiently intensive to meet all the demands of modern society upon the teacher for aid. There is an urgent call for systematic home and school education in sex-problems. Here and there, as under Professor Jessie Phelps at the Michigan State Normal College, excellent work in a most practical and sensible way is being done; but such instruction should become a matter of course through the land. Is it not meet that college departments of household science and sociology should join hands in the training of leaders for this much needed service? Perhaps such a program as the following is feasible:

COURSE VI. *Sex-Education.*—1. The elementary biology and physiology of sex. 2. The customs, beliefs, symbols, and folklore of early societies regarding the sexual life and reproduction. 3. Instruction needed as a preparation for marriage and the functions and responsibilities of motherhood and fatherhood: Biological and social significance of courtship; "romantic love," its value and its danger; origin and social menace of the double standard of sex-morality. 4. Negative eugenics: Sterilization of criminals; legal restraints on the marriage of the unfit. 5. Social diseases: The organized movement to check the great "black plague"; social causes and proposed remedies of prostitution; the "white slave" traffic. 6. Positive eugenics: Heredity and selection for the improvement of the human breed. 7. The Odin-Ward doctrine of potential genius.

The youngest and one of the most helpful branches of sociology is social anthropology. It deals with the social or cultural elements of anthropology as distinguished from the merely physical. The subject is packed with information relating to the early life of man in the household and the tribe. Here are two courses which in the hands of Prof. Hutton Webster of the University of Nebraska have proved decidedly successful:

COURSE VII. *Primitive Culture: A Study of the Early Life of Mankind as Revealed in Monuments and Implements, Customs, Institutions, and Beliefs.*—1. The origin and development of language; the beginnings of writing and alphabets. 2. Discovery and use of fire; primitive industrial methods; food and clothing; the domestication of plants and animals; early methods of transportation. 3. Beginning of scientific knowledge; of the fine arts; of music and poetry. 4. Marriage and family life amongst the lower races. 5. Beginnings of government. 6. Evolution of private property and money; of slavery and serfdom; of crime and primitive justice; early religious ideas, rites and mythology.

Excellent texts for such a study are E. B. Taylor, Anthropology (New York, 1881), and W. I. Thomas, Source Book for Social Origins (Chicago, 1909).

COURSE VIII. *Folklore: A Study of Those Features of Primitive Culture Which Still Remain Among Civilised Peoples.*—1. Folk-faith: Survivals of savage belief in spirits, in magic, and in myths and legends. 2. Folk-literature: Fairy tales, ballads, nursery rhymes, proverbs, riddles, and fables. 3. Folk-customs: Popular festivals, ceremonies, games and sports, symbols, and minor superstitions.

Valuable aids for this study are A. C. Haddan, The Study of Man (New York, 1898), and M. R. Cox, An Introduction to Folk-Lore (2d ed., London, 1904).

Shall the Family Group Be Re-Socialized?

These eight courses, it is hoped, may serve at least as a "trial" answer to the question set for this hour's discussion. The subject is by no means exhausted; yet, under present conditions, it is probable that few departments may be able to adopt even the suggested program. There is room for election and for substitution. In this paper, an effort has been made to reveal the meaning for social progress of a close fraternal alliance between sociology and household science. For the hardest and noblest task now demanded of the teacher is to create a rational system of education, broad enough and deep enough to embrace every aspect of the family-life in its relations to the larger social life. There must be provided a many-sided training for marriage and parenthood as well as for the economic, artistic, and administrative factors of home-building. The home must be rescued from the din and throng of the market-place; it must regain something of the group-privacy which it had before the industrial revolution; but it must not do so at the expense of mental isolation. The home will not have less sanctity when through it flows the swift current of the larger social life. In our days, the family group as such is no longer recognized in law—by the state. Its ancient corporate bond has been dissolved. Yet it still has spiritual ties which may be strengthened through education. Is it too wild a fancy to dream that sometime the family group may again become socialized? When through the efficient training of its members in household science and in the sociology of the domestic relations the family has "found itself" as a psychic fact, when it has become thoroughly aware of its proper functions in the social order, may it not safely and profitably be awarded by the state a large and concrete share in the world's administrative work?

COURSES IN SOCIOLOGY.

CHARLES A. ELLWOOD, Ph.D.

Professor of Sociology, University of Missouri.

I need not say that I am in very hearty accord with all that Professor Howard has said in his excellent paper. What I shall say is supplementary, in the way of approaching the subject from a slightly different standpoint.

Whether sociology has any vital relation to household science or not depends, of course, upon the point of view. If household science deals merely with questions of food, shelter, and clothing, then, of course, these questions can be studied quite independently of the home or the family as an institution, for we should still need food, shelter, and clothing even though the institution of the family and the private home were abolished, as we understand them. It is only when we assume the family and the private home as necessary social institutions that Home Economics becomes a genuinely social science. That this is assumed by you is indicated by the name of your Association. I like the name "Home Economics" for that reason, although I feel that household science, as Professor Howard has indicated, would be an even more exact designation for your science, because the word economics in modern times has come to be limited to the material things of life, whereas I believe that household science should consider not less the spiritual things in the household.

If the home or the private household is assumed as a necessary social institution, and is the real subject matter of your science, then household science becomes an applied social science, and its relation to sociology is that of the relation of any applied science to the pure science upon which it is based. Now, sociology is a pure science and for the purpose of our discussion, I think may be adequately defined as the biology and psychology of the social life. At any rate in its theoretical aspects this is exactly what sociology is, the biology and psychology of human association

The family is one of the fundamental forms of human association, and it is upon the family as an institution that our whole social life

rests. The home or the household may be defined as the more or less material embodiment of this most intimate form of human association which we know as the family, the association of husband and wife, and parents and children. It must be evident, therefore, that household science must take into account, or rather must be based upon, the knowledge of the biological and psychological factors at work in the institution of the family. The biological factors in the home, or in the family life, have certainly not been neglected by your science, and especially not on the side of nutrition, sanitation, and the like. The real vital elements, however, in the family are the relations of individuals to one another, and these relations are mainly psychological or spiritual, as we say. It is not sufficient that the nutrition and health of all members of the family be looked after, it is even more important that all the relations of the family to one another be of such a character as to constitute what we call a *good* home. The real object of your science can surely be nothing less than to secure the up-building of *good* homes, homes which shall produce the highest type of manhood and womanhood. Therefore, the spiritual aspects or functions of the family and the home must be taken account of by the student of household science.

Household science can hardly be studied intelligently without understanding the meaning, the function, and the purpose of the family and the home life in the total life of humanity. This means that we must consider the family and the home as social institutions related to every other social institution and having a vast purpose in the total human life. This function is really the greatest of all social functions, for it is the function of producing the new individuals in society, equipping them for life, and sending them forth to do their work in the world. Workers in household science need to see their movement, therefore, as a part of the vast movement which is now going on for social uplift. The movement for instruction in the household sciences is essentially a movement for social betterment; hence the student of household science needs to understand the connection of her work with all the movements in human society for social improvement, such as the movement for better housing, against child labor, and the like. Every housekeeper would indeed find a new meaning and a new dignity in her work if she could realize its bearing upon the total life of humanity. It seems to me that this outlook, this understanding of the deeper meaning of her work which the student of household science, and even every housekeeper needs, can only be gotten from

the study of the origin and development, structure and function of the family as an institution in society, that is, it can only be gotten from sociology.

I fear Professor Howard has frightened some of you by outlining no less than eight courses in sociology which should be taken by the student of household science. I agree with him that all these courses should be taken, and especially by one who does graduate work in household science. I take it, however, that he was giving you a "counsel of perfection" rather than presenting the irreducible minimum of courses in sociology necessary for the ordinary student in household science who takes only four years for a course. I would reduce the required courses to three in number: First a course in general sociology in order that the biological and psychological factors in the social life generally and the place of the family in the collective life may be understood; secondly, a special course on the origin, development and function of the family; and thirdly, a course on modern philanthropic and social movements to show the intimate connection between all improvement of living conditions in the family and improvement in living conditions in the community generally.

In my opinion it would be well if the first two courses, the course in general sociology and in the sociology of the family should be united in a single course—the family being made to illustrate the working of the essential biological and psychological factors in the social life. This is what has been done at the University of Missouri for a number of years with great success. The student gets in one course his general view of society and a considerable degree of special knowledge regarding the origin, development, and modern conditions of the family and the home. For these three courses not more than ten hours would be needed out of a total of the one hundred and twenty required for graduation. I, therefore, conclude that these three courses should be required, and not elective, for all students specializing in household science.

WHAT COURSES IN SOCIOLOGY, PURE OR APPLIED, SHOULD BE INCLUDED IN SCHOOLS OR COLLEGE DEPARTMENTS OF HOUSEHOLD SCIENCE?[1]

ANNA GARLIN SPENCER.
University of Wisconsin.

After a discussion of Home Economics courses for both successful home making and vocational usefulness, Mrs. Spencer spoke as follows:

On the other hand, those technical schools of household science that minister to the needs of more mature students, those who are in training for higher paid and more responsible positions,—professional, commercial, mechanical, philanthropic,—should offer to their students thorough courses in sociology, not only as contributing toward a knowledge of theories of social development, history of institutions, social psychology, social control, and social progress, but also those elements of applied sociology which give a permanent foundation for personal and social ethics and a definite method of human uplift. If such a high-grade technical school is attached to a university, it can easily secure the needed instruction along these lines; if it is an independent school it must provide its own professors in the science of human development and the art of conscious human progress. Psychology, personal and social; physical development, on a well defined biological foundation; the history and meaning of social institutions; social aspects of education as a "process in the spiritual evolution of the race"—these are essential studies. The evolution of the family and its vital place in the socialization of the individual; the racial, political and economic factors in civilizations; the control and abolition of social ills, such as crime, vice, disease, poverty; the outlining of a social ideal in general and in particular as related to one's own locality; the essential next steps in social progress and how to attain them;—surely these are vital necessities of study for women

[1]A condensation of a paper presented at the St. Louis Meeting of the American Home Economics Association, December 1910.

of "light and leading," whether in vocational positions or at the head of private homes of social influence. It seems also that educational institutions dealing with the mechanics and the economics of the home life might well *lead* in emphasizing these social values of that home life and the society of which it is the center.

It should be added that the ethical content of applied sociology must be clearly and inspiringly presented in courses for women students if those courses are to make their strongest appeal. The genius of womanhood is intensely practical, and the function of motherhood has given an unconquerable tendency toward personalization in social service; and hence, the law of human development must be translated for the average young woman in terms of the *duty* of social service and the *gospel* of social uplift, in order to reach her inmost sources of distinctive power. The fact also that "teaching is woman's organic office," and that other fact—that in all ages she has been socially charged with the care and protection of the child, the aged, the weak, the defective and the incompetent,—should give a strong leaning toward the further translation of applied sociology in terms of enlightened philanthropy and moral reform. The home must be itself socialized as well as help to socialize its inmates. If so, then the women must be socialized, not alone in feeling but in perception of moral values and the true uses of idealism.

What has been said in regard to sociological studies in technical schools of household science applies with equal force to such departments in colleges and universities. No woman can be considered highly educated today who has not some knowledge along these lines to give her breadth of view and poise of character. If men may be safely left to specialize in vocations without that clear sense of interrelationship of parts and law-governed movements in the whole of society which sociological studies are so well fitted to give, woman can not be so left a prey to unbridled specialization. For women, as mothers, are and must be the centre of the social structure and must be fitted adequately to keep social progress steady and evolutionary, instead of leaving it to become erratic and revolutionary; and the best balanced education for women, therefore, is a vital social necessity. The most invaluable of variations from type, even genius itself, must be used at last, as contributions merely to the commonwealth of the commonplace "fabric of the world." Women must aid in this process, not merely by force of biological laws, but by intelligent pur-

posive effort, such as a better knowledge of social law and social tendencies can give.

So far as the normal schools are concerned, all elements of sociology, pure or applied, which have particularly to do with the social aspects of education, are indispensible for the training of teachers. Nor should this sociological approach to education be sharpened too exclusively toward the School as a social institution. The State has taken over from the Family and the Church the control of education, and the School is in closest touch with the home and the ethical ideals of society. The School in the United States is the one unifying influence in our "melting pot" of nations.

The greatest of social needs in our country seems to be a minimum of ethical ideal common to all classes as a basis of agreement in the training of children, and of decision concerning imperative next steps of social reform and progress. Herbart declares our chief need in education to be "character training, based on an irrefragible foundation of morality." Where shall be found that irrefragible foundation of morality, save in the testimony of human experience, deduced by searching and fearless inquiry into the social results of motives and acts as these are interpreted by the trained reason? Only an irrefragible foundation of morality of such a sort can be a united morality, strong enough to control vagrant and unsocial impulse, dominate education, and give method to social action. If it is true that we need this minimum of commonly accepted ethical standard, we must get it from the School chiefly, but it must carry its sanctions over into the home and realize its ideals through the political and economic and social order. If we depend chiefly upon the School to initiate a moral unification as a guide to the common life, and if the School can only do this as it bases its ethics on the experience of the race, we must grow teachers for the public elementary schools capable of the high exercise of mind this inquiry into the verdict of the nature of things demands. How can we do it unless we have not only courses of study in sociology, pure and applied, in the normal schools, but an atmosphere of valiant truthseeking and scientific veracity equal to that any college or university can boast? The normal schools, with or without courses in household science must be enlarged in this manner: but it so happens that manual training and nature study and art work and household science courses have already made inroads into the antiquated curriculum of normal schools, and the group of "pro-

gressives" represented by the teachers of these subjects are opening the way to more scientific and accurate work in sociology. Hence the appropriateness of using such departments for the extension of that social knowledge which teachers of the common people most need.

One word I beg to add respecting the high school and its departments of household science in relation to courses in sociology. The high schools were not included definitely in the question this paper has tried to answer; but no problem in education pleads more eloquently for solution than that of a possible grounding of pupils of the high school in the main principles of social science. Since but a small fraction of young people go to college, and attendance upon day and evening high school is constantly and rapidly increasing, the question is important. And since departments of household science in high schools reach and influence tens of thousands of young girls where the college and technical school reach their hundreds, those who believe in the value of sociological study in connection with such departments must press the question. In the reaction of the School upon the Family, we find a strategic point where the boy and girl, at the time when their individualism and sense of choice are keenest, take from the high school to the home the standards they gain from its teaching. Moreover, while the college woman, if she has profited by her opportunity to gain command of culture-tools, can easily make good deficiencies in her college course as they reveal themselves to her ripened experience, the average girl of well-to-do and fairly well educated parents who ends her formal schooling on the day she graduates from high school has learned so little of so many things that she is likely to fail in knowledge of ways of getting the later instruction she needs. If she is to know anything of sociology, she must get it early: or perhaps *very late* in "tabloid form," at clubs or lecture courses. But how teach Sociology, pure or applied, in the high school? Surely not pure sociology, at all, at least by text books. To see youth struggling under, not with, abstract statements of social laws and conditions, or confused by much descriptive treatment of the remote or strange in human existence, is a sorry sight!

Applied sociology, however, taught by a teacher who is saturated with sound and balanced theory, but vital and appealing in practical use, is distinctly a high school study. It is, however, in my opinion, the ethical content of applied sociology that should form the basis of such study in classes below college. Civics, based on right understanding of group relationship and the social institutions, especially

the Family and the State, which have given us our sense of human solidarity; vocational ethics in choice and standards of work, including such study of economic history and its social inter-relations as may throw light upon personal problems and lead to large views of human industry and of personal achievement; and the *sociological basis for self-culture*, physical, mental, moral, the cosmic reasons for making the most and best of oneself as a part of the social whole—all these and more constitute that ethics which Ward tells us "is a part of applied sociology." And since youth is vital in its relation to life, questioning all things with its imperious "What have you for *me?*", it seems clear that youth has a right to gain certain universal standards of choice and of action in the conduct of life, from the right application of sociological theories and facts from the right sort of teacher.

Most that I have written seems to apply to the teaching of sociology, whether or not associated with household science, and may therefore need excuse as too general. It is not forgotten, however, that schools and departments of household science, because they deal with family life, are closest perhaps of all to the rapidly clarifying consciousness of the need for more, and more thorough and effective, instruction in sociology. The reason of this is that the family, of all social institutions, the household, of all our inherited industrial centers, are most profoundly affected by the economic change of modern life. And women are in the storm centre of this profound reorganization of the family and of household labor. They must be, for they are the centre of this centre.

Therefore, if sociology has any guidance for womanhood in an hour of radical change of circumstance, any fresh sanctions for established codes of morals in marriage, any new readings of social responsibility for the home in an hour when the old admonitions fail to command, in the name of social health and social progress, send all the girls and women to school to the new science! And if they take it more eagerly, as seems to be the case, when mixed with special ingredients called household science, by all means make the combination!

EXTRACTS FROM A DISCUSSION OF THE EDUCATION OF GIRLS IN DOMESTIC SOCIOLOGY AND THE ARTS OF HOME-MAKING.

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Household Hygiene.—Whatever compliments may be paid to modern architecture, the fact remains that most homes are deficient in general sanitation. As witnesses to this are tuberculosis and the long catalogue of respiratory diseases and other ills which are essentially house-bred maladies. The modern house breeds disease, and one of the crying defects of modern education is that the keepers and inhabitants of the house have not been taught that much may be done to obviate the dangers, and that they are largely responsible. During the present year we may calculate that about one-fortieth of the population of the United States will be constantly sick. That means that every day there will be 2,000,000 homes harboring sick people; and most of these will be sick with preventable diseases, that is, illnesses which the application of knowledge would have obviated.

There are homes in which children or adults are sick pretty much all of the time through the winter; and there are other homes in which such sickness is unusual. The difference will commonly be found to reside in the observance by the latter of certain principles of hygiene of which the former are ignorant. I am acquainted with young women who according to the standards of their social environment would be regarded as cultured and enlightened, but whose ignorance when they become mothers, I can predict, will cost their children a great price.

It is not necessary that every one in the household shall be wise; the influence of one woman who is familiar with hygiene is often sufficient to create the atmosphere of salubrity. That a mother shall be conversant with the conditions essential to the preservation of health must be obvious. But where shall she learn them? Or shall it be left to chance? Is not prevention better than summoning the doctor?

General household sanitation may be studied with profit by every young woman who expects to live in a house. Ventilation is so meagerly understood by the average woman that one might have the impression that she does not realize that fresh air is really essential to health. Graduates of our institutions for higher education sleep by preference, not compulsion, in bedrooms in which the air is vicious, poisoning themselves with the exhalations from their own bodies. The "night air" dread, founded upon superstition and ignorance, is rife among them. But they are not the only sufferers; their children pay the penalty of the mother's deficiencies, and the gamut of child-destroying respiratory illnesses runs through all of the year excepting the summer months when air is permitted.

Bad air is one of the greatest of the curses afflicting society—far greater than alcohol, and more subtle and insidious in its operations. It is responsible for a large part of the ills which demand the services of the physician during the shut-up months of the year. Girls will not learn this at their clubs, in the current magazines, or in society; but if they are taught it in a practical and scientific manner they will remember it. The teaching upon this subject in the average class in physiology is a travesty. In one class in a large preparatory school for girls, the teacher, after elaborating upon the merits of fresh air, concluded with the admonition that the bedroom windows should be left open at night two inches at the top and bottom; and the students knew that the teacher's own practice was to keep her windows tightly shut.

Out-of-door sleeping should be taught not only to be a desirable but also a practical thing. A wholesome impetus can be given to the appreciation of fresh air by an explanation and, if possible, by a demonstration of outdoor sleeping. That more and more people are doing this should be taught; and also the prophecy may be ventured that, as the day was when bathrooms were not an essential, the day is coming when a house without provisions for outdoor sleeping will be regarded as being as incomplete as a house without a bathroom.

Cleanliness should be scientifically understood by those responsible for the order of homes and food. This subject until recently was upon a rule-of-thumb basis; but the science of bacteriology has defined just what cleanliness is and placed it within the realms of accuracy. Cleanliness has both an hygienic and an esthetic side. Its practical significance should be elucidated.

A final subject for consideration under household hygiene is that of heating. It might be said that a woman need not know anything of the methods of heating houses; but this subject is introduced because of the inconvenience, to say the least, which is entailed by the average housewife's lack of knowledge of it. It does not involve much time or labor to present to a young woman the principles of house heating, the means by which it is accomplished, its economics, and hygiene. That the American home is overheated is generally conceded. The educated woman should know what this means, and just what are the objections to it.

The peculiarities of the various methods of heating may with advantage be described—the stove, the fireplace, the furnace, radiators, and heating by indirect radiation. The dangers of those intolerable heating iniquities, the oil stove and the gas stove, should be presented. The importance of maintaining adequate moisture in the air in the presence of artificial heat is another matter worthy of attention.

Extrinsic Social Relations.—The home can be made of importance in its relations to the community and, indeed, this should be regarded as one of its duties to society. To be sure, the home is organized for the protection, culture, and promotion of the members of the family; but it serves its highest function when its benefits are disseminated into other homes and among other individuals.

Views differ as to how far this may be carried. It is my own opinion that it should be carried as far as possible so long as it does not interfere with the closeness and integrity of the family circle.

In considering the extrinsic social relations we should think of the important question, what can the home do for society besides sending out into the world its best products, men and women? The home as a social center should be discussed. Its obligation to invite others into it to partake of its atmosphere and to bring into it something in exchange is patent. It cannot wisely be shut off from the communal interests. Let no man regard his house as an ascetic monastery on the one hand or as a public tavern on the other.

The conditions which give the home social standing and the estimate which the community places upon it are worthy of consideration. Home social functions, their meaning and importance, may be impressed upon the student with advantage. In a school for girls in one of our great cities the classes appoint committees on entertainment, whose business it is on certain occasions to administer all of the business of a reception or other similar affair. This is one of the

best features of the education received by the young women in this school, although it is no part of the curriculum. These committees have the whole responsibility of decorations, ordering and paying for the food, issuing invitations, providing some special features of interest, receiving the guests, dressing and appearing graciously, harmonizing and carrying on the function, and then putting things in order when it is done. It is all of value because it is in line with preparation for life. Still, comparatively few mothers appreciate its importance. They say "My daughter receives all of this training at home." Does she? Positively no. At home, the mother does the ordering, assumes the responsibility, and demands to be the central figure of the show; the father pays the bills, the maids clear up the muss, and the mother lies in bed in the morning to get over her headache. The way to train a girl for responsibility is to give her responsibility.

The school may wisely put in its curriculum instruction in the sociology of the sort of entertainment that is worth while. View the average afternoon women's party, whether it be "bridge" or "tea," and one becomes first impressed with the superficiality and inanity of the thing. If he looks a little closer the hypocrisy can be seen just under the surface. But of open-mindedness, culture, enlightenment, or the opportunity for the propagation of an idea, he will see but little in this atmosphere of chatter, rustling silks, perfumery, and stuffiness. It is at least an opportunity for pedagogy, if not its function, to tell girls the things that are worth while and encourage their interest in them.

Wealth and Want.—No girl enters life with an adequate education unless she has been taught the real meaning of wealth and want. She should not be expected to pick up the essentials from the desultory reading of essays or novels or even from casual conversations or lectures. The time to impress her with the lessons of the comparative values of things is while she is studying the lessons which she understands are to prepare her for life. Let girls have presented to them in a systematic and interesting manner, by a teacher whom they respect and honor, a catalogue of the things that are worth while, the things that make for the best happiness, the things which any woman, rich or poor, can lay hold of, and which make for growth and culture. Let them be taught the real meaning of wealth and poverty.

While the lot of most women will fall with that of the so-called middle class, the student may wisely be given some instruction concerning the relations of the woman to the home under the conditions of

the two extremes—financial wealth and poverty. Consideration can be given to the obligations and opportunities of wealth. The pernicious effects of the prevalent charity of giving should be contrasted with constructive charity. And the opportunities of the poor are also worthy of being touched upon. The essential is that girls shall be given a broad insight into values, and that they shall be imbued with the spirit to seize upon and make the most of the opportunities which life offers.

Household Emergencies.—Household emergencies may more properly be designated without the limiting adjective, for emergencies which occur within the household may also transpire outside it. That emergencies of one sort or another are of frequent occurrence is well known. Whether or not the result is to be one of disaster is usually determined by the presence of some individual who knows what to do and does it. It is not necessary to enter into a discussion of all of the unexpected calamities which may confront the household. The chiefest belong in the category of bodily traumatisms, drowning, sicknesses, and fire. Some instruction in first aid to the injured should be given to every girl who is to have a practical education. She may not be made able to meet with perfect scientific skill the requirements demanded in a case of hemorrhage, fracture, choking, or fainting, but she can be put in possession of sufficient knowledge so that she shall not stand by, scream, and wring her hands in helpless misery. She should have in her mind enough practical knowledge to know that there is something to be done at once. She can at least be saved from doing some absurd and unscientific thing which can only have the effect to prolong delay and make it seem that something is being done when it is not. Every ambulance surgeon knows of the unnecessary waste of life due to simple ignorance of the fact that any accessible bleeding can be controlled by the simple expedient of making pressure on the bleeding vessel. Children and loved ones perish before the eyes of the helpless because of ignorance of this.

To overcome the fear and awe inspired by a bleeding wound, a practical demonstration may be made with a dog or cat, and the girl who participates in the experiment will find that it gives her confidence which she will carry with her all her life. It is said that "a little knowledge is a dangerous thing," but this is a vicious doctrine. It should never be promulgated unless accompanied with the proviso, "but not so dangerous as none." The reason that people stand paralyzed with inaction in the presence of an emergency is not so much

because of some inherent mental process which causes inactivity under such circumstances as because they do not know what to do. That is the reason why they do nothing.

Emergencies peculiar to fire are among the common causes of calamity. No girl can claim to be well educated unless she knows (1) how to put out a fire, (2) what to do when her own clothes are on fire, (3) how to deal with another person whose clothes are on fire, and (4) how to preserve herself in the presence of fire.

Two experiences may be cited which have come within my knowledge while this paper was in process of development. One day I saw a beautiful girl of sixteen on her way to school. Under her arm was a Latin text book. I wondered at the time if she were really studying what would be of help to her in life. Three days later I learned that she was dead. These are the circumstances: Before retiring at night she tried on in her bedroom a new skirt of mercerized fabric which she was to wear to a party the following day. The head of a match flew off and ignited it. She ran into the hall screaming for help. Her mother rushed out and saw at the head of the stairs a column of flame mounting so high as to completely obscure the face of the girl. A man finally reached the scene and threw a coat around her as she stood. No one had ever told the girl what to do in such an emergency. She could think of nothing to do because it had never been put into her mind. All that she knew about fires of this sort was that the victims had suffered a horrible death. She had read of such things and had heard them discussed. Her thoughts were of the horrible death that confronted her. She did not know that the worst thing to do was to go into the hall and stand at the head of the stairs. She did not know that the best thing to do was to throw herself flat on the floor and pull the bed clothes, rugs, or any other heavy fabrics, over everything but her head. Nor did the man who came to her rescue know that to keep the flames away from her head he must lay her prone. She died within a few hours; and the Latin class lost one of its best pupils.

A short time later in the same neighborhood in a large educational institution, a class of girls was holding a sheet and pillow case dance. A girl, nineteen years of age, to replenish a pyrotechnic flame poured alcohol from a bottle upon a dish of burning alcohol. The explosion set fire to her costume. In an assemblage of fifty young women there was not one who had confidence that she knew what to do. What happened was that the girl's costume burned until she was beyond

recovery. She lived a few hours. Two others were badly burned by trying to put out the flame. The costume that caught fire was a cotton sheet. It could have been pulled off in a few seconds. There was plenty of time to have lain the girl on the floor and covered her body up to her neck with sheets worn by the other girls, but it was not done.

These two cases are cited as typical of common occurrences. Almost every large general hospital has its quota of cases of burns all the time. I take down the reports of two such institutions and find that 6 per cent of their deaths among surgical patients are from this cause. Most cases occur among women. Every ambulance surgeon has much experience with this particular injury. Women continue to be burned to death because they do not know what to do.

Conclusions.—The object of this course of training in the conduct of life, here set forth, is to prepare young women for complete living, to give them an insight into the things worth while, the essentials which make for the full life of joy and efficiency—all with special reference to the home. There is no such thing as culture without vital application. The mind of the girl is occupied with airy dreams of parties, smart clothes, and young men, because the significance of these things has not been disclosed to her and because nothing more substantial has taken their places. Latin or literary criticism will not occupy the mind of the average girl because these studies lack the pragmatic quality of fitness. But a practical knowledge of the every-day things of life about the girl, the things which are worth while, can be made to occupy her mind because their applicability is everywhere manifest. And the airy dreams can be turned into useful channels if their meaning and value are disclosed to her.

It will be found that there are women who are not in sympathy with such a course, holding that household work is drudgery from which the modern woman must be emancipated. They argue that many functions, once a part of the home, have been taken out of it and still more are to follow. Some go so far as to strip the home of pretty much all its erstwhile activities. Whatever may be the merits of these contentions, three facts remain:—(1) No matter what the future may have in store, the present order demands that many things shall still be done in the home; (2) the homes of women who are busy advocating communalization of the domestic functions are usually lacking in the evidences of efficient home administration (while telling other people how to live, their own hearthstones are unkept); and (3)

finally, of all the activities in which a woman may be engaged, and it must be granted that she should be occupied, she is best adapted to be employed in the maintenance of her home—this is the function for which by nature she is constituted, which is capable of giving her the largest measure of happiness in return, which is the field in which she can be of the greatest service to the community, aad which has possibilities for culture beyond that of any other employment.

It may be said that these subjects are so simple that every girl should learn them at home, but they are so simple that even the home thinks the girl will absorb them out of the atmosphere. Whatever may be thought on the matter, the fact is that the girl does not learn them, chiefly for the reason that it is nobody's business to instruct her specifically in them.

Many a girl leaves college with no adequate idea of the importance of the home and its possibilities for happiness. Often her own home has not exemplified the best ideals. Too often she thinks of the home as a prosaic affair, a sort of necessary ennui, and she aspires not to be the maker of a home but to be something great—a social worker, intent upon other people's affairs, a suffragist, a reformer, or a writer—failing to realize that the most efficient social workers and reformers are they who have learned the ideals of the home, and that the only effective preparation for writing is not in learning how to write but in having experiences with things that are worth writing about.

This course will be found not acceptable in conventional institutions because it takes "too much time." Yet these institutions are sending out into the world with a diploma, certifying to their attainments, young women who are lacking in qualifications in every one of the eleven major subjects herein presented. As though an analysis of the details of Paradise Lost were of more importance than the details of a home; as though a study of the horrible life of Henry VIII might be of more use than a knowledge of the practical significance of matrimony; as though a classification of the Georgian poets were more important than the classification of food stuffs; as though ability to seem learned, by virtue of a smattering of trivial knowledge, were more important than the actual fact of being learned by virtue of the possession of knowledge which should make for efficiency and happiness. The study of the useful cannot be said to take too much time in any institution which is giving time to things of minor importance. It is Paradise Lost, Henry VIII, and the Georgian poets, that take too much time.

A cultured person is one who is familiar with the general principles of world knowledge, who loves the truth, whose mind is not beset with superstitions, who prefers and encourages what is beautiful and good, who differentiates the important from the trivial with a disposition favorable to that which is important, who is so perfect in his ability to perform well at least one thing which is useful that he excels most men in this particular function, who habitually performs services which are useful to mankind, who finds pleasure in the performance of such services, who is kind and possessed of sympathy for others, whatever their station, who adds to these initiative and self-reliance, and who when overcome by infirmities still is bereft of none of these qualities but that of action. Such is a cultured person, man or woman. This is quite different from the culture which the schools have recognized. This is culture of activity and usefulness; not that of learning.

The modern school system is directly descended from that education which sought to prepare its pupils for idleness by filling them with a sense of superiority to useful work. This was accomplished by occupying itself with such learning as could not be employed to grapple with the daily problems of the world about. Much that is of little use has been replaced by the study of things of greater service, but still there remains a disproportion between that of lesser value which is taught and that of greater value which is not taught. The process of evolution in the modern school has operated but tardily. Better results could have been secured by revolution. If some group of cultured people could have organized a modern school system *de novo*, with utter disregard for the learning of the past, as though there had never before been any schools, the result would have been admirable. But the traditions are upon us like an incubus. It is a difficult task to shake them off. They hold us to the past.

It is fortunate that we have a newer conception of culture. It is most fortunate that according to this conception, culture is only to be had in the pursuit of the useful.

SOME PRACTICAL ASPECTS OF THE TEACHING OF DIETETICS.[1]

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Sixteen institutions of college grade, distributed from east to west, from the State of Washington to that of Tennessee, replied fully to a questionaire as to the courses they are offering in dietetics. Such points were covered as the amount of time devoted to the course, its pre-requisites, its purpose and scope, the proportion of laboratory work, the computations made, and the text and reference books found most useful.

From the returns we would draw the following conclusions: Of all these the undeveloped course at the University of Washington gives the least, with 54 hours and a prerequisite of chemistry, physiology and cookery; while Simmons College stands next, with a higher prerequisite only. The one which covers the most ground is The New York State College of Agriculture, as the course goes throughout the year, 36 weeks, 8 hours a week, or an aggregate of 288 hours, with a prerequisite of biology, botany, physics, two years' chemistry, physiology, nutrition and economics. The mean is that at the University of Wisconsin, as yet undeveloped. Teachers College, Columbia University, stands near the mean with an aggregate of 90 hours and prerequisites of biology, physiology, two years' chemistry, and two years' cooking, carrying parallel with it, if desired, courses in dietaries and nutrition, and leading to an advanced course in nutrition and dietetics. The chief criticism of all of the courses seems to be in the small amount of time given to the consideration of cost.

To sum up, then, the courses are usually called Dietetics; they are given for one semester of 16 to 18 weeks' duration, and average 6 hours, 2 hours of lectures and two 2-hour periods of laboratory work, weekly; some cookery, chemistry and physiology are prerequisites;

[1] Extracts from a Thesis presented in April, 1910, to the Faculty of Philosophy, Columbia University, for the degree of Master of Arts.

and the course is either parallel or prerequisite to therapeutic cookery and dietaries, and may include home nursing and diet in disease.

Having thus reviewed the work of the schools the country over, our next attempt is to draft a course which shall be useful and practical as well as scientific. We would aim to make the course one leading to general knowledge, rather than for professional use, and making the subject vital with relation to accuracy, economy, and systematic management of food and the nutrition of the human mechanism by the diet. It seems that this is better accomplished in those schools where there are many and various prerequisites and in which the subject leads to further work and investigation, so that the subject matter of this course is focused and concrete. Evidently such courses as introductory and simple cookery, the economics of food production and utilization, biology, physics, chemistry (inorganic, organic, and food), hygiene, and physiology should be prerequisites; whereas such courses as institutional and home dietaries, physiology and nutrition, therapeutic dietaries and cookery should be subsequent courses. The last three of these, together with physiological chemistry, care and feeding of infants and children, bacteriology, and experimental cookery, might be parallel. The best assignment of time seems to be from 6 to 7 hours, of which 4 are given to laboratory practice in the weighing and preparation of the food materials; the rest of the time being given to lectures and discussions or quizzes on the subject matter.

The scope as stated in the catalogue might read as follows:

> Dietetics. Lectures, conferences, and laboratory work. 4 points. 2 lectures, 2 laboratory, 1 semester. Total, 96 hours.
>
> To be taken by all candidates for a B.S. degree.
>
> A study of the fundamental principles of human nutrition and food values under varying physiological, economic, and social conditions; historic outline of dietary investigations and modern dietary standards, with popular misconceptions as to food; the construction of practical menus for individual, family and large groups; special diets, such as infant feeding and therapeutic diets. Prerequisites: cookery, physics, chemistry (inorganic, organic, and food), biology (including some bacteriology), physiology and hygiene, and applied economics.

To explain more fully: The course should be a study of the relative composition of the human body, its waste and repair, and the chemistry and physiology of digestion, absorption and metabolism of protein, fat, and carbohydrates, as governed by age, sex, occupation, season, climate, health, and inherited tendencies; the composition of various typical foods and their calorie or fuel value as explained by the physical

aspects of heat; the proportion of nutrients and ash constituents; the limitations governed by cost, and the relation of national combinations of foods and dishes; a brief outline of the dietary investigations and standards involving the decision of the individual standard; the collection of menus; the means of applying scientific principles in planning and constructing practical menus for the individual, typical family, and large group, with regard to the proper and attractive combination of foods, involving some of the most typical misconceptions as to food, such as the value of doughnuts, fried foods, pork, cream, onions, potato, and the use of water; nutritive value and cost of food; finally such special dietaries as feeding of infants and children, menus for the sick and convalescent, and in extreme age.

We shall find that the student, in order to save time and strength, will need in this work to have had an initiatory course in heavy practical work in the preparation and service of foods. It would be well to carry at the same time a course in experimental cookery or large-quantity cookery or both, and it might well lead to courses in sick-room cookery and in the preparation of infants' and children's foods. Of the sciences, physics will be necessary to understand calorimetry, fuel values, and combustion; biology for the relation of the body to the food and to bacterial action; chemistry for the composition and reactions of the foods, and the relation and requirement in mineral or ash constituents; physiology, for a proper understanding of the body itself, its anatomy and metabolism; physiological chemistry would be eminently profitable in order to comprehend well the complete metabolism of the food elements, and the waste products, also the special diets as regulated by age, health, or disease. Of course the more the student could have of the theoretical medical sciences, the better. This side of the work naturally leads to deeper study of normal and abnormal, or therapeutic diets, and those in different parts of the world. Various general courses in economics of a philanthropic, sociological or institutional nature would be very useful to the student as well as interesting and broadening. If considered from the standpoint of pedagogy or the teaching of dietetics, a maximum of science would be advisable, and should be preceded by a course in psychology, applied psychology, ethics, and the history of education, and some course in the methods of teaching. The last two, however, might easily be taken parallel. If for institution management, it should undoubtedly be preceded by courses in elementary and large-quantity cookery, with a heavy science prerequisite, and should have as parallels, therapeutic

cookery, home nursing, and institution dietaries, that is, dietaries as applied to a large group.

With these things in view, and realizing that the work is incomplete unless both theory in lectures and quizzes and practice in preparation in the laboratory are given, we may consider a list of 32 lessons, which may be used and adapted according to necessity. These have been arranged to cover 16 weeks of 6 hours a week, 2 hours for lectures and two 2-hour periods for laboratory work, or 64 lessons, the laboratory work being correlated to the lecture work, or vice versa. The course is best taken in the senior year, or perhaps the junior—not before. Inspection of lecture or laboratory note-books, or both, may well be left to the discretion of the instructor.

Scheme of Lessons.

1. Introductory; discussion of the dietary problem, books, description of Prof. Willard's method of computation.

2, 3, and 4. Review of the physiology of digestion, including the anatomy, differentiation of foods, and action of digestive juices.

5. End of the review with an open discussion and summary.

6. Commence the study of the composition of foods, beginning with fruit, cereals, sugar, milk, eggs, cream, butter, etc.

7. Instruction in the method of computing 100-calorie portions.

8, 9, 10. Continue chemical composition of foods, with the 100-calorie computation of recipes.

11. Review of the composition of foods and general discussion.

12, 13. Comparative nutritive value of foods most used: Cereals, vegetables, fruits, milk, eggs, meats, fish, etc.: and relative cost of each.

14. Comparative nutritive value of the less common foods.

15. Methods of measuring the energy requirement. Reports on the computations of the students. N. B. This only if there is no laboratory work in connection with the course.

16. History of standards of food requirement, and points governing these.

17. Review correlating chemistry and the nutritive value of foods and standard requirements.

18. Ash constituents and requirements.

19. Five or ten minute reports from each student of collected menus with criticism of each. Special attention to values from the economic standpoint.

20. Quiz by presentation of a menu for revision.

21, 22. Discussion of cheap dietaries and menus for improvement without raising the cost.

23. Changes in medium cost diet to high cost diet and discussion of values.

24, 25. Diet for a family of normal adults and adolescents; changed to (1) for the aged, (2) for heavy labor.

26. Discussion of noteworthy national diets and what they offer to Americans.

27. Ten minute reports of changes necessary in the diet in given diseases.
28, 29. Care and feeding of infants and young children.
30. National dishes compared in value and cost with the nearest American equivalents.
31. Summary and oral quiz.
32. Open discussion on requested topics.

SEQUENCE OF LABORATORY WORK.

1. Measurement of ordinary uncooked foods by Willard's method.
2. Measurement of ordinary cooked foods by Willard's method.
3. The 100-calorie portion of ordinary uncooked foods.
4. The 100-calorie portion of ordinary cooked foods.
5. The 100-calorie portion of the less usual foods.
6. Comparative study of the amounts for equal nutritive value in foods of the same class, 100-calorie basis.
7. Sample diets (3 meals) under given requirements, noting the cost in each case.
8. Sample diets (3 meals) according to given authorities, noting the cost as above.
9. Three typical meals showing the ash constituents, noting the cost as above.
10. Three meals under given requirements re-adapted to low and high cost, etc.
11. Preparation of three meals for diets in common diseases, the actual amounts being calculated.
12. Preparation of infants' food and children's meals.
13. Preparation of foreign dishes and American equivalents.

N. B.—This gives 13 topics for the 32 periods, averaging one for each two and one-third lessons.

With the foregoing lessons in mind, we may proceed to a detailed discussion of them and to the texts and reference material advisable. Referring to the various texts in use, Office of Experiment Stations Bulletin 28 of the U. S. Department of Agriculture, The Chemical Composition of American Food Materials, is an absolute necessity: Hutchinson's Foods and Dietetics is a close second, but it would seem better to give the bulk of the data by lectures, making Hutchinson a semi-text, as it were, and requiring the students to own it. The following is the list of books most used by the several schools for reference on the subject:

(1) Chittenden: Nutrition of Man; (2) Friedenwald and Rühner: Diet in Health and Disease; (3) Holt: Care and Feeding of Children; (4) Howells: Text-book of Physiology; (5) Lusk: Science of Nutrition; (6) Richards: Cost of Living; (7) Farmers' Bulletins of the U. S. Department of Agriculture.

To this may be added at will any from the following long list, which are used as references in different places:

(1) Abderhalden: Text-book of Physiological Chemistry; (2) American Text-book of Physiology; (3) Armsby: Principles of Animal Nutrition; (4) Armstrong, E. F.: Glucose and the Glucosides; (5) Atwater: Chemistry of Foods and Nutrition, et. al.; (6) Bailey: Text-book of Sanitary and Applied Chemistry; (7) Baylies: The Nature of Enzyme Action; (8) Bevier: Selection and Preparation of Food; (9) Brown: The Baby; (10) Bunge, Gustave von: Textbook of Chemistry and Physiology; (11) Chapin: Theory and Practice of Infant Feeding; (12) Chittenden: Physiological Economy of Nutrition; (13) Dukes: School Diet; (14) Fletcher: A. B.—Z. of Our Own Nutrition; (15) Gautier: Diet and Dietetics; (16) Grey: Anatomy; (17) Halliburton: Essentials of Chemical Physiology (see Kirkes); (18) Hardy, W. B.: Colloids; (19) Horgan: How to Feed Children; (20) Hopkins, F. G.: The Development and Present Position of Physiological Chemistry; (21) Hough and Sigwick: Human Mechanism; (22) Kirkes: Handbook of Physiology; (23) Leach: Food Inspection; (24) Leathes, J. B.: The Fats; (25) Leffman and Brown: Food Analysis; (26) Ling: The Polysaccharides; (27) Long, J. H.: Textbooks of Chemistry and Physiology; (28) Mann: Chemistry of Proteids; (29) Mitchell: Meat; (30) Norton: Food and Dietetics; (31) Osborne T. B.: The Vegetable Proteins; (32) Pattee: Practical Dietetics; (33) Plimmer, R. H. A.: The Chemical Constitution of Proteins; (34) Remsen: Inorganic and Organic Chemistries; (35) Schryver, S. B.: The General Character of the Proteins; (36) Sidgwick and Wilson: General Biology; (37) Spargo: Common Sense of the Milk Question; (38) Spatholitz: Anatomy; (39) Starling: Text-book of Physiology and Pathological Chemistry; (40) Thompson: Food and Feeding; (41) Winton: Microscopy of Foods; (42) Wiley: Food and Food Adulterants; (43) Yeo: Food and Health and Disease; (44) *American Journal of Physiology;* (45) Bibliography of *Journal of Home Economics;* (46) *Journal of American Medical Association;* (47) Lake Placid Reports.

Most of the trouble in the development of the courses in the past has been due to the fact that so large a mass of data was taught without enough emphasis being put on the actual application. Besides this, there has often been too much time spent on unnecessary and unapplied calculations. It is wise to have the laboratory work as part of the course to emphasize the theory of the class room, and it is absolutely necessary to illustrate each bit of calculation of food, of dish, or of menu by actual weight measurement and preparation in the laboratory.

The idea with the laboratory work is to carry the practice as nearly parallel with the lecture as is possible and feasible. The first effort should be to give the student a visual notion of the value of foods, and an easy way of figuring on them; next, to make clear the use and calculations of the 100-calorie portion; this accomplished, to take the usual portion served in meals and fix its calorie value. It should then be an easy transition to the preparation of all sorts of meals, without very much extra calculation or computation. The purpose with

regard to the meals for diseased conditions is to relate these meals to the normal dietary and not to infringe in the least on the courses in cookery for invalids and convalescents. It seems, however, about the only time at which the student may become acquainted with the appearance and preparation of infant's food and proprietary foods and the making and serving of children's meals, a business too much left to the discretion, or lack of discretion, of the servants. By the incorporation of the foreign meals and foods it is hoped to point out the value that may be derived by taking the experience of other peoples and generations, this being really the survival of those meals which are fittest. It is a scheme which might well have twice as many laboratory periods.

If the instructor cares to use any graphic methods, the latest and most useful methods are those to be found in the *Journal of the American Medical Association* for April 20, 1907—an article by Dr. Fisher of Yale—and The Cornell Reading Course, Series II, Foods, Human Nutrition, No. 6, for November, 1909.

BLACKBOARD WORK IN THE TEACHING OF DOMESTIC SCIENCE.

ELIZABETH WILLARD SAXTON.

Teacher of Domestic Science, Seventh and Eighth Grades, Washington, D. C.

Have you a blackboard in the room in which you teach domestic science? Of what use is it to you? Few instructors realize the value of drawing in the teaching of domestic science, and often the board is used merely for a list of ingredients, a few remarks in regard to the lessons or items concerning the note book, or sometimes not at all. The ingredients and rules should indeed be there, but is there not space for more, space where a picture could be drawn? A lesson on grains is made attractive by a sketch of a bunch of wheat. Have the children in your school ever seen wheat growing?

One of the earliest lessons given in the first year of cooking is a study of the potato. This plant is easily represented on the board. A number of pictures of the entire potato plant can be found in various books on the subject of cookery. If it is desired to show the proportional parts of starch and water in the composition of a potato a cross section can be put on the board with lines indicating these. The potato plant itself is easy to obtain, so the lesson can be given from that. The picture in the "Border of Vegetables" (Fig. 1, D) was made from a small plant, brought into the class-room by one of the pupils.

There is nothing that will make a schoolroom look more inviting than to have the blackboards decorated. Leave 10 feet or more for routine work and use the rest for pictures of objects to be talked about in the course of lessons to be given during the year.

Perhaps it would be well, in the cereal lesson, to have a picture of a bunch of wheat to show the difference between wheat and oats. If you have specimens, that is very good, but if you do not happen to have them, the next best thing to a real specimen is a drawing and this drawing should be done by the child.

In a class where the ages of the pupils range from twelve to sixteen years, there are always one or two who are competent to put on the

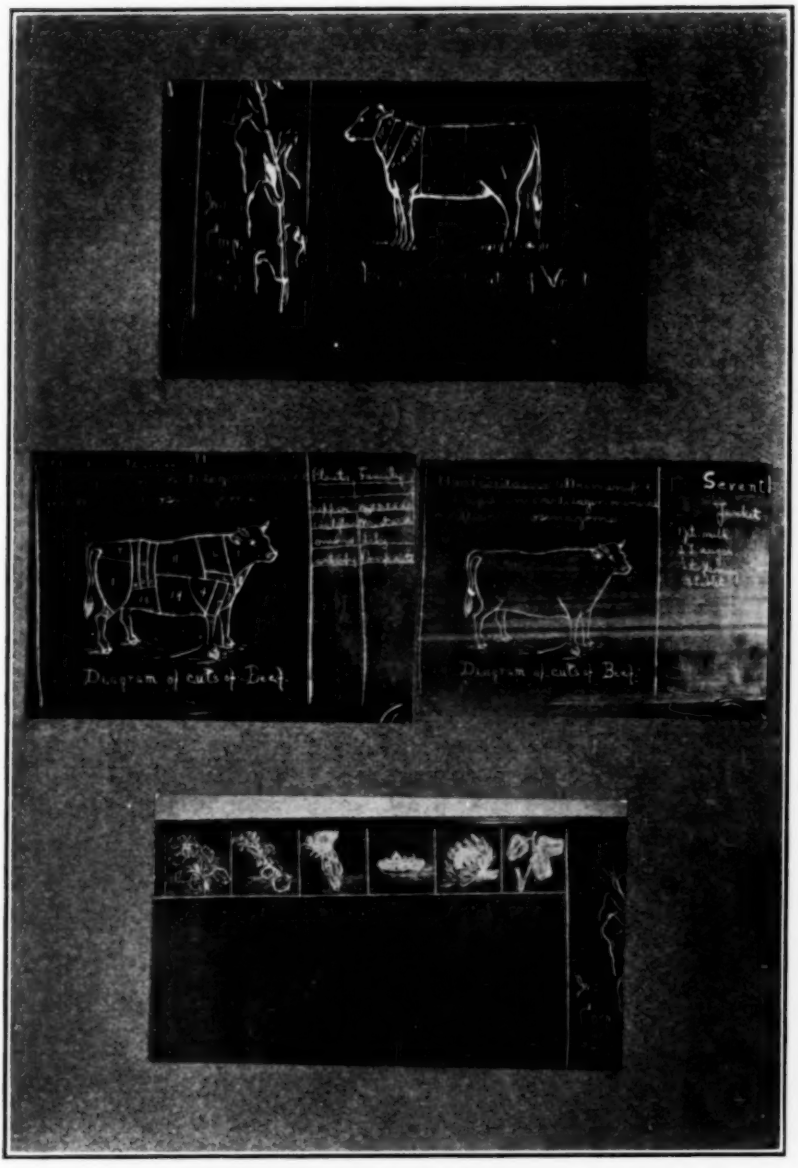

FIG. 1. USE OF THE BLACKBOARD IN TEACHING DOMESTIC SCIENCE: A, INDIAN CORN AND DIAGRAM OF CUTS OF VEAL. B, C, DIAGRAMS OF CUTS OF BEEF. D, BORDER OF VEGETABLES.

drawings. This work of the pupil need not interfere with the lesson. If she finishes her class work before the period is over let her begin the drawing. She will find time to finish it in the few moments before or after her lessons of the next two or three weeks.

It will not be long before this wheat will be made into flour. Other flours will be discussed, among them perhaps cornmeal. A picture of corn which may be appropriately drawn on the board is given in Fig. 1, A. The pictures give interest to the lesson. In talking of these flours it may be convenient and profitable to show by means of a cross section of the wheat grain how different flours are obtained by the removal of the various layers of the grain. (See Fig. 2, B.)

I have here attempted only to give suggestions for board work, not a model lesson. It would be difficult in a short paper of this kind to take up every lesson studied in the cooking class and illustrate it with a picture, but where the importance of the board drawing is felt, one will soon realize how hard it is to find in any one place pictures that will be of real help. That is the reason these prints are gathered together.

Later on the study of meats will be taken up, and here is your chance to show the pupil the location of the different cuts. With only the outline of the cow, sheep, or other animal given, let the pupil go to the board, and put in the line to show where the piece is cut. In this work, though the teacher must help the child somewhat, the latter has a feeling of self-reliance while holding the chalk in her hand and actually putting in the line. In different parts of the country the cuts of meat vary, but the pictures given will illustrate how the animal looks before and after the series of meat lessons and after the course is completed, according to the method of cutting used in Washington. (See Fig. 1, B and C.) Each child is given a hectograph diagram to paste in the back of her note book. The numbers and lines are put by them in their diagram just as they are on the board, and on the opposite page corresponding numbers with a short description telling the name and use of the piece.

Seasonings used for soups, sauces, and preserving all offer attractive board pictures, pictures which are decorative as well as useful. (See Fig. 2, C.)

Some of you may live in cities and towns near the sea, where oysters are plentiful, but with others who live inland it is not always an easy matter to get an oyster in the shell to show the class. Why not draw one on the board? This gives you a chance to show the various parts

and the child's interest is aroused at once when a fish is found with organs similar to those in the human body.

In a school I know one of the prettiest lessons ever given had for its subject the onion. On the board were pictures of every kind of onion one would be likely to know, arranged not in stilted order, but very artistically. At the desks, the children, half standing, with hands raised were ready and anxious to go to the board to point out and name the different kinds of onions. Bermuda, yellow, spring, white and Spanish onions were all there, and all well known by the interested pupils.

The child learns most readily perhaps by having the object itself in the hand and next by the picture, because if the eye is not attracted what is being said to the child often fails to make an impression on the mind. Drawing certainly helps to make shadowy things real.

A border of vegetables, one drawn each week by the girls in the class, will give an idea of the lessons given. This might also be carried out to show when the vegetables are in season or the part of the plant used. The border here illustrated shows the following series of lessons on vegetables, beginning at the right: Stuffed peppers, boiled cauliflower, baked onions, escalloped salsify, stuffed potatoes and cream of spinach soup. (See Fig. 1, D.)

A board reserved for spelling is a convenience and a help, especially if the recipes are written in composition form by the children, each one having her own note book. The hard words in the lesson are spelled by the children and put on the board. A list of these may be kept, and when there is time after a short lesson a spelling test may be given.

It is well to have a board reserved for an appropriate quotation. These may be found in the newer cook books and if desired and there is time, the quotation may be put at the top of the lesson. If it is used with the lesson it must apply to what is being cooked. One quotation will be given, not because it is nearly as good as a great many others, but because I ran across it after a long search to find something interesting on the subject, and because it can be used nicely with a lesson on brussels sprouts.

> That herb which o'er the whole terrestrial globe
> Doth flourish, and in great abundance yields,
> To low plebeian and the haughty king,
> In winter, cabbage, and green sprouts in spring.

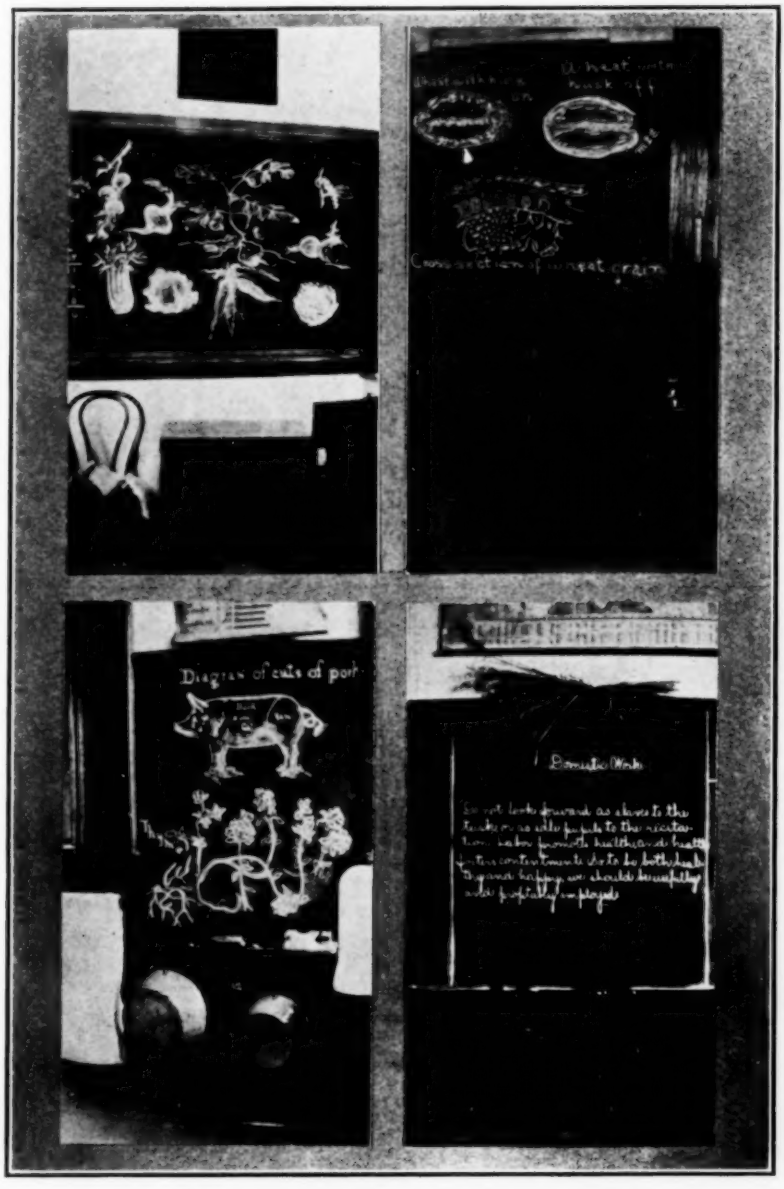

FIG. 2. USE OF THE BLACKBOARD IN TEACHING DOMESTIC SCIENCE. A, SOME COMMON VEGETABLES. B, SECTION OF A GRAIN OF WHEAT. C, THYME AND DIAGRAM OF CUTS OF PORK. D, A QUOTATION BOARD WITH A BUNCH OF OATS ABOVE.

CATERING FOR HIGH-SCHOOL STUDENTS.[1]

MRS. ALICE M. HOTCHKIN.

Supervisor of High School Lunch Rooms, Rochester, N. Y.

To serve a successful luncheon, whether in a school or factory, the lunch-room and its equipment must first receive careful consideration. Nowhere has this been done more thoroughly than in Rochester, N. Y., in its high schools and factories.

The two high schools are practically alike, each having cost about $350,000, and each accommodating 1240 pupils. In designing these schools, as much stress was laid upon planning and equipping the lunch-rooms as upon any part of the building. They are situated in the basement, and are light, well ventilated rooms capable of seating 1000. The Flemish oak furniture is so simple in design that it is easily kept clean by dusting every morning with a sanitary duster slightly dampened.

The counter is in the center of the room, is 55 feet long, and 12 feet wide, and like a horse-shoe in shape with the open end towards the kitchen. The top of the counter is 18 inches wide and 30 inches high, and it has two shelves underneath. Inside the counter are the steam and serving tables, milk, chocolate and water tanks, sinks and the dish washer. Over the milk tank hangs this sign: "Clean milk from tuberculin tested cows." It is through the influence and co-operation of our efficient health officer that we are enabled to serve this kind of milk. We display this sign as a suggestion to the students. Our kitchens are equipped with every modern convenience. Steam cookers are used as much as possible, for this method of cooking does not add to our expenses, since waste steam is utilized. Many labor-saving devices are used, including a potato-peeler run by electricity which peels a bushel of potatoes in five minutes, saving 8 pounds of potatoes to every bushel and using only 0.75 cent's worth of electricity.

[1] Read at the Lake Placid Conference on Household and Institution Management, June 29. 1910.

The menus are written on blackboards, which hang in conspicuous places. Cashiers are conveniently stationed, so that students purchase their tickets on their way to the counter. The tickets used cost only 2½ cents per 1000 and are burned after each meal.

Although we serve about 1200 every day in the East High School lunch-room, good order always prevails, for which there are two reasons. First, they are municipal affairs not run for revenue, and all realize that the best quality of food is furnished at cost. Second, the board of education and the principals of the schools consider the lunch-rooms equally important with any other branch of school work.

Every effort is made to have the nourishing dishes so attractive that they will be chosen in preference to those with smaller food values. Whipped cream is used wherever possible. Plain rice pudding or tapioca cream is unpopular, but if embellished with a small portion of whipped cream it at once becomes an attractive dessert. The same menu is never repeated within two weeks.

The planning of menus is a problem. Dishes which are most popular in the East High School are scorned in the West High School and vice versa. This same condition was later found in the various factory lunch-rooms of Rochester; the menus must be planned to suit the taste of the master mechanic and the common laborer, as well as for the different nationalities.

The high school lunches proved so satisfactory as to attract the attention of manufacturers of the city, with the result that six factory lunchrooms are conducted on the same plan as the high school lunch-rooms. It is interesting to note that whenever a factory lunch-room has been opened, saloons lose their patrons, for the factory employees prefer hot, nourishing lunches to liquor. In the factories the 15-cent lunch is popular, but does not find many patrons in the schools, as that amount of money is more than most students wish to spend.

To those contemplating lunch-room work, a few suggestions may be helpful. A floor space of 30 x 90 feet can be arranged to give a kitchen 22 x 12 feet, a store room 8 x 12 feet, a counter 20 x 11 and a seating capacity of 130. The manager should know every branch of the work herself, so that if necessary she can take the cook's place. The employees soon learn whether she is capable, for as a rule they are sharp, shrewd people and quickly detect shortcomings in their employer. The work should be thoroughly systematized, so that each one knows her duties and how much time is required for doing them. I have found it most satisfactory to have the women exchange

work, so that if one is absent, another can take her place. Do not economize on the cook's salary, for only the best service should be employed.

Insist upon your maids sitting at their work as much as possible. A light luncheon served to them in the middle of the forenoon is conducive to good temper, for often these women eat a light breakfast at home.

Demand absolute truthfulness from the men of whom you purchase your goods. They soon learn that your orders must be delivered when promised. Make a careful list of all goods needed, so as not to ask for unnecessary deliveries. Do not market by telephone. Meat, fruit and vegetables should be purchased by the eye and not the voice.

With the growing demand for trained women to take the management of these various lunch-rooms, the directors of the Mechanics' Institute of Rochester decided that a course should be established there for training women for lunch-room management. The first applicants were women of an inferior order, but the standard has been raised so that only educated women are now students in this course.

REPORT ON THE LUNCH ROOM OF THE WILLIAM PENN HIGH SCHOOL.[1]

EMMA SMEDLEY.

In Charge.

In September, 1909, the William Penn High School for girls was opened in the commodious new building at Fifteenth and Wallace Streets, Philadelphia. From the attractive rooms provided, luncheon is served daily to about seventy members of the faculty and to as many of the eighteen hundred pupils as care to avail themselves of the opportunity.

In providing such luncheons, we recognize that the growing child requires a liberal supply of attractive, nutritious, easily digested food, which may be procured at a reasonable cost.

In many schools the girls are taught to cook and serve food in the class-room, but the value of this training will be lessened if the same pupil is allowed to go to the lunch counter at recess and select anything she may choose from a plentiful supply of cakes, pastry, candies, etc. So long as the school management permits this character of luncheon to be served in boys' as well as girls' schools, they are neglecting the opportunity of establishing habits as regards the choosing of food in the vast army of young people who will in a few short years be the men and women of our cities and nation.

The William Penn High School aims to train young women so that they will be equipped for the duties which life sets before them, whether in the home or the business world. The present luncheon scheme has been undertaken with the hope that there may emanate from it an influence that may become an important factor in the fulfilment of the noble purpose of the school.

This luncheon is under the care of a group of four persons appointed by the board of education, consisting of the chairman of the board in charge of the school, one other member of the committee, the

[1] Read at the Lake Placid Conference on Household and Institution Management, June 29, 1910.

principal and one teacher of the school. The duty of these persons is to appoint a superintendent of luncheons who shall act as purchasing agent, employ help, and have full charge of carrying out the general policy of the school with regard to the luncheon. A second committee appointed by the principal of the school is helpful to the superintendent through suggestions which it offers regarding the details specially connected with the welfare of the pupils. This committee consists of five members of the faculty, the chairman being the teacher who is a member of the committee appointed by the board. The chairman of this committee is the director of the commercial department of the school, and keeps in close touch with the methods of bookkeeping, approves all bills, and audits accounts.

The person selected by the committee to act as superintendent of luncheons has had experience in institution management, and has been a teacher of Home Economics for several years. She is fully in sympathy with the policy of the school, and aims to provide a luncheon that would be a credit to any school of domestic science.

We have been most fortunate in securing the services of ten helpers who are interested in the success of the enterprise. My assistant has had experience as housekeeper in her own home, and holds a certificate from the domestic science department of Drexel Institute. She is very capable and is glad to give her attention to every detail of the cooking, thus enabling me to carry out my ideals regarding the quality of the foods which are prepared. This trained cook has proved to be a great economy, as her knowledge of foods and her interest in the work insures uniform results in cooking, and prevents the waste of food by carefully utilizing all leftovers. The other helpers have had no special training for this character of work. They do not belong to the servant class, but have their own homes in the neighborhood and are glad to earn $5 or $6 a week by spending part of each day at the lunch-room. The hours for the employees are from nine until four o'clock, though a few come only during the business hours, 11 to 2 o'clock. I am frequently asked where I get such women. The answer is that they come to me and I have a long waiting list. One man is needed to do the heavy work, care for floors, operate the dishwasher, etc.

We are assisted in serving the pupils at the recess hour by twenty or more students, who are members of the cooking classes of the school, and volunteer for half the recess one day each week. For this service they are given two five-cent luncheon checks.

The period for luncheon from beginning to end is from 11:45 to 12:25. The school is dismissed in two sections, at 11:45 and ten minutes later, thereby enabling us to utilize to the best advantage our limited table accommodations and facilities for serving, as many of the pupils of the first section have finished their lunch and are ready to leave the room by the time the others have been served at the counter. Each person returns her dishes to the counter as she passes out of the room. These dishes are all stacked by the students ready for washing, as I consider this duty an important part of their training.

To give every girl first chance at the counter and the same length of time in class recitation, different sections of the school are dismissed on alternate weeks at the first bell and student helpers reverse in the same manner, one month coming the first, and the next month the last, fifteen minutes of recess period.

The board of education provides the lunch-rooms, kitchen and pantry with equipment and fuel. The cooking has been made very laborious this year because of the limited number of utensils which have been provided. With only two gas stoves and these designed for family use, it is very difficult to serve a varied menu for faculty and pupils, especially when the top of one stove is required the greater part of two days to cook the 20 gallons of vegetable soup which are required for one day. It is impossible to make as much oyster or cream of tomato soups as the pupils want because the utensils used for the soups are required each day for making the nine gallons of cocoa. In many similar ways the work is constantly complicated by the lack of adequate utensils and appliances. During the last few weeks there has been installed a steam equipment consisting of stock pots, vegetable cooker, cocoa urns, steam tables and dish-washer which will be in readiness for next year's work. With the steam cookers we hope to prepare the large quantities needed more easily, and the steam dish-washer will considerably reduce the daily labor.

Aluminum checks in three sizes, bearing the name of the school on one side and the numbers one, three or five on the other, are provided as a part of the equipment. These checks are purchased by the students before school and at recess, and used in place of money at the counters, thus simplifying the service, as each waitress always receives the correct change and puts it into a cash box which remains locked until opened by the cashier after lunch.

The faculty dining-room presents an attractive appearance when the tables are spread with linen, glass, and silver, in readiness for the

luncheon. An à la carte luncheon similar to that prepared for the pupils is available for the teachers, and in addition a table d'hôte luncheon is provided at a cost of fifteen cents, consisting of meat, vegetable, rolls, butter, tea, coffee, cocoa or milk.

Owing to the unfinished condition of the building in September, 1909, it was not possible to open the lunch-room for the use of the students until November 1. Lunches were, however, served to the faculty early in October.

Even with the prevailing high prices of food, we are able to meet our running expenses for food, service and supervision.

All food is prepared at the school except bread, rolls and ice cream. Soup, which is very popular, is served every day, the same kind not appearing on the menu two days in succession.

For five cents we serve one-fourth of a quart of soup and one roll or two soda crackers. The following varieties of soup have been served during the winter: Vegetable, tomato, cream of tomato, tomato bouillon, cream of corn, corn chowder, cream of potato, pea soup, bean soup, cream of beans, macaroni soup and oyster soup. Other five cent foods are macaroni and cheese, boiled rice with tomato sauce, scalloped rice, scalloped tomatoes, baked beans, beef stew, casserole of rice and meat, and scalloped fish.

Sandwiches are also sold for five cents each, hot roast beef and ham being most popular. Cold tongue is also used for sandwiches, as well as sardines, cheese, olives and cheese, olives, pimento and olive, egg, peanut and lettuce. Making sandwiches constitutes a small part of the daily preparations, since the majority of pupils bring this part of their luncheon from home. One-fifth of a quart of cocoa or of milk, either hot or cold, is sold for three cents. A large number of buttered rolls at two cents each are sold with cocoa or milk, making a combination for five cents, while some pupils prefer six graham or soda crackers instead of the roll for the same price. Milk and buttermilk are also sold in pint bottles.

Stewed fruit and one kind of home-made dessert are served each day, such as apple tapioca, peach tapioca, tapioca custard, cup-custards, banana custard, floating island, rice pudding, chocolate pudding, date pudding, snow pudding with custard, stewed fruits, figs, prunes, cherries, peaches, pineapple and baked apples. Gingerbread and chocolate or jelly layer cake are made occasionally. Two dried figs or eight dates are wrapped in paraffin paper by the helpers and sold for two cents a package. One, three-and five-cent cakes of

sweet chocolate and chocolate nut bars for five cents are also popular. Bananas, apples, oranges, grapefruit, grapes, and peaches are among the fresh fruits served.

From a personal investigation of the plant in which the ice cream is made we feel satisfied that it is clean and of good quality. Natural fruit flavors and vanilla beans are used in the preparation. It is cut in blocks, eight to each quart, and wrapped in paper. Each block is sold for five cents.

A typical menu for one day is as follows:

Oyster soup and two crackers, 5 cents; macaroni and cheese, 5 cents; ham sandwich, 5 cents; olive sandwich, 5 cents; stewed peaches, 3 cents; grapefruit marmalade and crackers, 3 cents; chocolate pudding, 3 cents; cocoa or milk, 3 cents; cocoa or milk and buttered roll, 5 cents; ice cream, 5 cents; crackers (two or three), 1 cent; dates or figs, 2 cents; sweet chocolate, 1, 3, or 5 cents; banana, 2 cents; orange, 3 cents; apple, 2 cents.

This menu is varied from day to day. The same dish does not appear more than once a week, but children constantly ask for something that was on the menu the previous day.

To quote from the report of the committee on high schools:

It is gratifying to be present at the school during the luncheon period and to observe the eagerness with which the pupils select from the variety spread before them. Many spend only a few pennies to supplement the cold lunch which they bring from home, while a few make two trips from counter to table before they are satisfied.

The committee has had words of appreciation from pupils and teachers which give evidence that children as well as older persons are glad to avail themselves of the opportunity of eating the right kind of food when they have the chance. And not to be overlooked is the fact that the school is educating these young women to appreciate the right kind of diet and to cultivate a taste for more wholesome food than many have had the opportunity of enjoying in their homes. This indirect benefit from the high school luncheon room is perhaps as important as the more obvious good of furnishing the girls with a substantial, digestible and suitable luncheon at a reasonable price, on every school day.

SCHOOL LUNCHEONS.[1]

ALICE C. BOUGHTON.

Philadelphia League of Home and School Associations.

For the past three years the Starr Centre Association of Philadelphia has been supplying penny luncheons at the ten o'clock recess to the children in several of the elementary public schools in the crowded district of the city. These luncheons consist of a variety of foods, including crackers, fresh fruit in season, stewed fruit, milk, and one hot dish, such as cocoa or rice pudding or soup, each day. The actual cost of each article is one cent, and the children receive in return one cent's worth of food, for the Association pays for all the equipment and for the supervision, preparation and serving of the luncheon.[2]

Last January another agency, The Home and School League, entered the field. It served at the noon recess a three-cent meal, calculated, as nearly as possible to be one-third of the child's ration. The school selected, an Orthodox Russian Jewish public school, was an unsatisfactory place in which to try a new plan, as it was difficult to convince the children and their parents that all the food served was kosher.

This year The Home and School League will serve three different types of luncheon in three different schools; in one it will serve a penny luncheon at the ten o'clock recess; in another a three-cent meal at noon, with a table containing penny luncheons for any children who have not three cents to spend; and at the third school a penny luncheon at ten o'clock, and a three-cent meal at noon.

At stated intervals a physical examination will be made of the children of each school and a record kept of each child. Under the direction of the committee making the investigation, a home and school visitor, who has had a normal course in domestic science as

[1] Read at the Lake Placid Conference on Household and Institution Management, June 29, 1910.

[2] For a more detailed account of these luncheons see a previous note (J. H. E., 2, (1910), No. 2, pp. 178–180.

well as training in social service, will follow the children into their homes in order to find out existing conditions and to put the families in touch with remedial agencies. By keeping a record of the children buying the luncheons a comparison is possible, not only between the children who take the luncheons and those who do not at any one school, but also between the value of different types of luncheons.

In the districts chosen there is a good field for investigation because of the industrial conditions which cause the same poverty and ignorance and the same neglect of the children by parents of many nationalities who are engaged with various kinds of labor.

Of course, this plan is only tentative and may not prove practical, but from the active coöperation of principals and teachers and through the earnest efforts of these engaged in the investigation much interesting and profitable information should be gained as to needs, and as to methods of reaching the needs, of the hundreds of undernourished children in our city schools.

DIET IN RELATION TO GROWTH.[1]

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School diet includes, in a broad sense, the diet of students between three and twenty-five years of age. These years of growth—twenty-two years—may be divided into four physiological periods: First, early childhood—from infancy to the completion of the period of rapid growth—which may be characterized as *the restless age;* second, medium or middle childhood—a short period after the rapid period of growth—which may be characterized as the *slowing-up period;* third, later childhood—a uniform period of growth extending from the end of the slowing-up period to the beginning of adolescence—called the *pre-adolescent age;* and fourth, *adolescence*—which extends from approaching maturity to the completion of growth.

The restless or nervous age applies very often to children between the ages of three and eight who seem restless and to need the dietetic treatment for nervous temperaments. Dr. O'Shea, in an article in the *Popular Science Monthly* for 1897, cites cases of extremely nervous children being cured by proper diet. Two such children of five and seven years were found to be suffering from a deficiency of protein constituents of the blood; the diet was regulated accordingly and the children were soon restored to normal condition. It is believed that there is a close connection between mental development and the character and quantity of the food.

During this period there is an intense development of the sense of taste and a desire for variety in food. Edwin A. Kirkpatrick, in his Fundamentals of Child Study, says:

> Variety in food develops the instinct of eating in a positive way so that by the time a child is three or four years old sensations of taste occupy a prominent place in his consciousness. This continues for several years and there is probably no time in life when the gustatory pleasures and pains are more intense than at five or six years of age. To gratify the desire for agreeable food and to avoid disagreeable tastes is at this time one of the chief motives in life.

[1] An abridgement of a paper read at the Lake Placid Conference on Household and Institution Management, June 29, 1910.

If it is possible to influence temperament through diet, it is at this early period, for it is in this physiological period, more than in any other, that the seeds of character which grow and bear fruit throughout life are planted. A professor of sociology once said that if he were to choose a dean of women he would examine, not the record of her degrees and subsequent work, but the record of her life before the age of seven.

The second physiological period, which in a general way includes the years of childhood from eight to ten, has been characterized as the slowing-up period because this age is marked by a general slowing-up of growth when metabolism is lessened and all activities of the body are retarded. Growth in childhood is rhythmic—a movement of alternate troughs and crests and this is a pronounced trough. The years just before this are those of very vigorous development and the body seems to need a respite in which to repair the unusual expenditure of tissue—it is as it were a sort of spore stage, and if the necessity for rest and care is recognized, the following years will be all the more full of vigor.

Unless this pause upon the part of nature is supplemented with careful attention to general health, diet, and careful attention to avoiding overtaxing the child, chorea, St. Vitus' dance or other diseases may develop during this period. As regards diet in pathological conditions at this period, however, it is important that, as with disease in general, the advice of a competent physician should be obtained.

This slowing-up period is also marked by grave tendencies to infection. With this weakened resistance to infectious diseases great care should be taken with the food supply. "For this reason, as well as others, it is safest not to give meat to a child before the age of ten at least [or until the end of this spore stage]. Before that the child can get all the necessary nitrogenous food from the daily allowance of four glasses of milk, one egg and the usual quantity of bread and cereal," to quote from Miss Hunt in School Meals for Children. Milk, in this period, may be supplemented with cocoa.

Later childhood, the third physiological period, from the end of the last period to the beginning of the adolescent age, is designated as the pre-adolescent age. This period is characterized by a more uniform growth during which there is usually no marked nutritional disturbance. It is the time of regular, happy life for normal children in preparation for the years of more intense activity. Economic con-

ditions seem to affect growth at this time more than later on. Dr. Key, who has made extensive observations upon the growth of children, says:

> The economic circumstances in which the children live exercise considerable influence on their physical development. The children of the poorer classes fall behind their companions of the same age from the homes of the well-to-do both in height and weight. The period of feeble development just before puberty is longer for the poorer children.

The weakened resistance of the body to infectious diseases, so characteristic of the preceding period, continues relatively weak. The use of meat at this age is very general, and great care should be taken in providing a pure supply.

The age of adolescence covers a long period, including the life of college as well as high school students. The dietetian can by careful, watchful diet during the college period strengthen the influences of the body for a sane, normal, healthy life. The diet of this period requires as careful attention as that usually given to the earlier years of adolescence. The protein food should be reduced in quantity in proportion to the lessened demands of growth, other satisfying food being given in its place. I myself would like to make a plea for carbohydrates in the form of sugar, having observed among college boys that this craving is the most healthful a boy may have. This recalls a student boarding table where an attempt was made to meet the "increased price of living" by serving at noon two dishes only—one a meat dish, and the other a vegetable or cereal, with no dessert, or as more appropriately called by the English a "sweet." The boys at the table invariably made their own dessert, which they craved, by covering their slices of bread with sugar. I sincerely contend that a better way to meet the higher prices is indeed to serve only two dishes, but to make one a substitute for meat, and the other a simple appetizing sweet dessert.

Dr. Winfield S. Hall, in Nutrition and Dietetics, alludes to the use of sugar as an important part of the diet during adolescence.

> The craving for sweets is a natural one. They should be eaten immediately following a meal, for then they seldom disturb digestion. Sweets are such a condensed form of energy that the craving for them at this time seems almost instinctive.

The evening meal should be as free as possible from all irritating substances and the attractiveness of service should be emphasized.

Dr. Hall recommends to young men, in his book From Youth Into Manhood that a light supper be taken at night with the heaviest meal in the middle of the day.

A college dining-room should maintain in a large measure the simplicity, wholesomeness, and attractiveness of the diet of childhood. The life of a student is one of peculiar strain and confinement and the diet should be regulated accordingly. It should, however, be served in such a way as to develop as far as possible the amenities of life. The rough and ready freedom of college life has its delights, but for many it is the best opportunity for social culture, and the etiquette of dining may well be included among the requirements of polite life. A college student, living in the resident hall, once remarked that she would have to go to a finishing school on leaving college in order to get into good habits of living again.

There is much to be said in favor of schools and colleges which require a change of costume for the evening meal. Perhaps there is hardly a habit more conducive to the spirit of repose and healthful culture during the evening than a wholesome preparation of this kind for this constant daily social gathering.

During a recent visit to Holloway College, in England, I was impressed by the daily ceremony of the dinner hour. Every one is required to dress for dinner, very simply, but a change is imperative. Each student is the hostess or guest of another student, the hostess being responsible for the seating and entertainment of her fellow student whom she has selected as her guest. Just before the dinner hour all gather in the library and forming a procession, with the president and instructors at the head, march to the dining room.

On another occasion, when a guest at dinner at one of the Oxford colleges, I noted that the faculty and students withdrew at the close of dinner to the social or common room, as it is there called. Coffee and wafers were served and a social half hour was spent around the fire.

[An increasing amount of attention is being given to the general subject of the feeding of children. For an additional discussion and summary of data the reader is referred to a recent bulletin from the Nutrition Investigations of the U. S. Department of Agriculture,[1] and also to Miss Hunt's bulletin[2] referred to above. A recent English treatise[3] also contains an excellent discussion.—Ed.]

[1] U. S. Dept. Agr., Office of Experiment Stations, Bul. 223, pp. 87–98.

[2] U. S. Bur. Education, Bul. 1909, No. 3.

[3] A System of Diet and Dietetics, edited by G. A. Sutherland, London.

Suggested Dietaries.

Suggested menus for children of different ages which it is believed are in general accord with the views expressed in the paper are given in the following pages:

Children's Dietaries.

Dietary for Children of 2½ years. Assumed Body Weight 30 lbs. (14 kg.).

Menus.

7 a.m.—Orange juice, 3 oz.; oatmeal, 2 tablespoonfuls (dry); cream, 2 tablespoonfuls; milk, 1 cup; toast, one-half slice; butter, one-half tablespoonful.

10 a.m.—Milk, 1 cup.

2 p.m.—Milk, 1 cup; baked potato (half a potato); one baked apple; one poached egg.

6 p.m.—Milk, 1 cup; toast one-half slice; butter, one-half tablespoonful.

Nutritive Value and Cost of the Above Dietary.

Material.	Weight.	Protein.	Fuel Value.	Cost.
	Oz.	*Gms.*	*Calories.*	*Dollars.*
Milk	34.4	32.18	675	0.20
Oranges	3.0	....	30	0.05
Oatmeal	0.44	2.10	50	0.0015
Cream	1.00	0.70	55	0.04
Toast	0.68	1.79	50	0.0027
Butter	0.46	0.14	100	0.014
Potato	2.10	1.32	50	0.01
Apple	3.30	0.25	50	0.05
Egg	1.29	4.81	50	0.04
Totals		43.29	1110	0.408

Dietary for Children of 4 years. Assumed Body Weight 40 lbs. (18 kg.).

Menus.

Breakfast.—Oatmeal, 2 tablespoonfuls (dry); cream, 2 tablespoonfuls; milk, 1 glass; toast, 2 slices; butter, 2 teaspoonfuls.

Dinner.—Omelet, 1 egg; spinach, 1 cup uncooked; milk, 1 glass; bread and butter, 2 slices; orange charlotte, small serving.

Supper.—Zwieback, 1 slice; cream of wheat, or similar wheat food, one-twelfth cup (dry); cream, 2 teaspoonfuls; milk, 3 teaspoonfuls; baked apple pulp, 1 small apple; milk, 1 glass.

10.30 p.m.—Milk, one-half glass.

Nutritive Value and Cost of the Above Dietary.

MATERIAL.	WEIGHT.	PROTEIN.	FUEL VALUE.	COST.
	Oz.	*Gms.*	*Calories.*	*Dollars.*
Milk	34.4	32.18	675	0.15
Oatmeal	0.44	2.10	50	0.0062
Cream of wheat, or similar wheat food	0.48	1.52	50	0.0025
Buttered toast	1.31	3.49	67	0.005
Spinach	1.75	1.66	12	0.050
Egg	1.34	4.63	50	0.04
Apples	3.74	0.31	50	0.05
Orange charlotte	0.34	0.75	10	0.0123
Bread	1.36	3.59	100	0.0055
Cream	4.80	3.40	227	0.0800
Zwieback	0.37	0.74	33	0.0042
Butter	0.48	0.13	105	0.0240
Totals		54.50	1429	0.4297

Dietary for Children of 6 years. Assumed Body Weight 44 lbs. (20 kg.).

Menus.

Breakfast.—One orange; oatmeal, 1 oz.; one egg; milk one and one-half cup; zwieback, 2 slices.

Dinner.—Chicken soup, 1 cup; one baked potato; asparagus, 5 oz.; bread, 1 slice; butter, one-half oz.; junket, three-fourths cup; milk, three-fourths cup.

Supper.—Zwieback, 4 slices; butter, one-half oz.; milk, three-fourths cup.

Nutritive Value and Cost of the Above Dietary.

MATERIAL.	WEIGHT.	PROTEIN.	FUEL VALUE.	COST.
	Oz.	*Gms.*	*Calories.*	*Dollars.*
Potato	4.23	2.64	99	0.014
Zwieback	0.83	4.64	200	0.025
Orange	6.8	0.05	10	0.05
Egg	2.68	9.06	100	0.04
Milk	34.4	32.17	675	0.108
Butter	1.0	0.26	200	0.025
Asparagus	5.0	1.1	20	0.06
Apple	1.64	0.33	53	0.05
Soup	8.00	8.42	50	0.123
Bread	1.36	3.59	100	0.005
Oatmeal	1.00	2.36	56	0.0056
Sugar	0.5	....	50	0.003
Totals		64.62	1703	0.508

DAILY LIFE IN ITALY.

ELLEN A. HUNTINGTON.

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The first dinner in an Italian pension is a revelation. The Italians eat the macaroni, which is served in long, unbroken strings with a delicious grated cheese, by wrapping the strings around their forks assisted by a large spoon held in the left hand. It seems a most expeditious way to eat the macaroni to say the least. And one American judged that so long as he was within the shadow of Rome he might do as the Romans did—but what disastrous results followed I hesitate to tell. If any one is lacking in imagination let him try it. The macaroni is followed by some unusual fried dishes, after which comes the roast, then a vegetable, next the inevitable lettuce, and finally ice cream. This is the general order of the Italian dinner except that in many places chicken accompanies the salad and a sweet dessert may replace the ice cream. For dinner as well as luncheon there is usually some hard cheese and bread at the end.

The ice cream of Italy is most delicious, as those who have enjoyed the "cassata" of Rome will testify. Nowhere in Italy, and it is not known elsewhere in Europe, is the cassata as delicious as in Rome. It is served in the form of a quarter of a melon; the outside is a frozen cream and the inside is a mixture of whipped cream, nuts, fruits and orange peel. Truly it is a dish "fit for the gods."

The "continental breakfast" is always a disappointment, for the meagre breakfast seems but an aggravation. It consists of coffee or chocolate, rolls and fresh butter. Can one ever forget the hard rolls of Italy? No need of Fletcherism there! The rolls are large, like miniature loaves of bread, and it is impossible to eat one in less than half an hour. After once trying the coffee an American usually prefers the chocolate, for the Italian roasts the berry until it is somewhat burned, and besides, one would judge, he possesses neither the French or the German coffee pots which we prize so highly.

To many people who recall Italy the picture which comes to mind first is that of vineyard upon vineyard, growing on the hillsides.

And here are made all the wines, from the chianti so commonly used to the choicest varieties. The drinking water of Italy is said to be of the best now, but a few years ago many people suffered with a fever in Rome and other Italian cities, traceable to the water.

A drive through the streets of Naples gives one a very clear insight into the general mode of life of the Italian. The doors of the houses are always open in the summer time and in passing, the beds, several in a row, may be seen from the street. These are sometimes covered with a neat white covering, while again they are but a bundle of rags. The women sit on the door step and the children play in the dirty "front yards." Usually a wire basket holding about a dozen very white eggs hangs at the side of the door. There may be one or two goats kept in the yard or there may a dozen or more driven off at a distance in the morning and brought home at night. Goat's milk is far more commonly used there than cow's milk. If it is the latter which is used the cow is driven from door to door and the boy milks into the long, narrow-necked flask as easily as our farmers milk into an open pail. But methods of adulteration of milk are known in this seemingly unprogressive country; for the boy who drives the cow has been known to carry a rubber bag of water under his arm and coat and the bag has a long rubber tube leading from it down his sleeve to his hand. As the clever boy milks he presses the bag with his arm and a fine stream of water unites with the milk.

The Italians produce several vegetables unknown to us. One of them served in many different forms in July is the "kukutzi," which before cooking looks like a long cucumber. They also use many fruits, fresh figs and nuts.

The macaroni which they make is in my opinion far superior to the macaroni on our American markets. But to see the drying of the strings in the market where dirt can so easily blow over it makes one feel content with our product and realize how sanitation lags in Italy. A general atmosphere of uncleanliness prevails; the streets are dirty; the houses which are built high and on hills are not arranged to admit of much sunlight; the furniture is usually upholstered and harbors fleas in the summer time; and the people seem to bear the earmarks of general uncleanliness.

We are sure that the people have clean clothes, for are not the women to be seen washing them in all the clear streams and rivers? It is certainly more picturesque to see the women with tucked-up skirts washing clothes on stones in the streams than bending over a

wash-board in a steaming tub, though we cannot help but wonder at the continuance of the custom. In conversation a short time ago a lady told of an experience she had had in Italy. She had become much interested in their method of washing and by signs asked permission of two women to try it. After one attempt with their method she pantomimed to them again that each should take a garment and see who could wash hers clean first. The Italians used the stones but the American soaped the garment thoroughly, rubbed it all over between her hands and then rinsed it. Great was the surprise of her competitors to find that the garment was clean so long before theirs was finished. But did they adopt the method? No, she left them scrubbing the garments on the stone just as when she started.

In retrospect, such a visit makes us congratulate ourselves that the necessity for sanitation and clean and wholesome food is being appreciated more and more, and to a certain extent put into practice, in our country.

ON THE DIETARY IN USE IN THE SOUTH PACIFIC ISLANDS.

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First in importance in these tropical islands is the supply of vegetables and fruit. Those common in these latitudes are the kumara (sweet potato), taro (*Arum Esculentum*), ui (yam) of many varieties, wild and cultivated, plantains and bananas of various kinds used as vegetables, papaw apple, kuru (bread fruit), tomatoes, pumpkins and squashes of several kinds. A few European vegetables grow in some of the islands, such as cabbage and lettuce. Other kinds required are imported from New Zealand and America to a limited extent.

The fruits consumed are of the usual tropical and sub-tropical varieties, including oranges, lemons, limes, shaddock, bananas, pineapples, papaw, rose apple, custard apple, avocado pear, guava, mangoes, granadilla, melons, and grapes (these last being inferior). The cocoanut is much used, particularly by the natives, both raw and cooked; in the latter case mostly in combination with various fruits and berries in the making of native puddings or the fruits of temperate climes, canned and preserved. Jams are imported from California and New Zealand to a considerable extent.

Fish comes next in importance as an article of diet. The most common are the maroro (flying fish), caught with a scoop net by torch light at night, the mangaa (carraconta), the aai, a large fish like a groper, and caught with a hook, mullet, and various other kinds known by native names. All kinds, including turtle, are more plentiful and easily caught in the lagoon islands, and, of particularly fine flavor, the ava (as big as the aai) and the kiokio, a silvery-scaled fish about 3 feet long, are peculiar to the latter islands. Canned salmon from America, sardines, etc., are also extensively used. The fish sauce used by the natives exclusively, and to a considerable extent by foreigners all over the South Seas, is composed simply of grated cocoanut and sea water, with a few Chili peppers added. Flavored with this sauce even raw fish is quite palatable.

In most of the islands the fresh meats mostly eaten are pork and poultry, but on the more important islands like Yahiti and Rarotonga refrigerating works have been started and butchers' meat of all kinds is kept in the freezing chamber and sold at retail. Canned and preserved meats from New Zealand are greatly used everywhere; also quantities of cheese, butter and preserved milk from the same country.

The natives universally prefer their national mode of cooking by steam generated with heated stones in their earth ovens (umu) and many of the foreigners adopt the same mode, because all vegetables are much better when cooked with steam, than when boiled. Bread, meat, and other kinds of food are of course cooked in the usual way. "Cubiu bread" (biscuit) is much used to save cooking.

People in the tropics are usually afoot soon after daybreak, in order to get as much work as possible done in the coolest part of the day. About 6 a.m. a light breakfast is usually partaken of, consisting chiefly of the fruits in season. The papaw apple, like the banana, is always in season, and when sprinkled with lemon or lime juice is very cool and appetizing; it also makes a good vegetable when cooked. Other breakfast foods are porridge (mush), cereals of various kinds, fish, bread and butter, etc., with tea or coffee or simply water. Cocoanut water is frequently used at all times as a beverage. At 11 a.m. comes the main breakfast (tiffin), which is of a more substantial nature, though the menu is about the same. Then follows a siesta of a couple of hours or more, after which all work again till evening, with dinner at 6 p.m. or later. At the two latter meals claret diluted with plain or cocoanut water is a common beverage. These hours are generally followed at the French islands, although in British and American communities on these seas the stereotyped meal times of breakfast at 7 or 8 a.m., dinner at noon or 1 p.m., and tea at 5 or 6 are much in vogue. In any case a light diet is considered the proper thing. The less flesh eaten in the tropics the better for the health of the individual. Most of us also bar alcohol.

THE STAFF OF LIFE.

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The average person in England is said to consume about six bushels of wheat in a year, while in the United States the average is estimated at four and a half bushels of wheat or 196 pounds of flour per year. Flour is made from potatoes, buckwheat, bananas, etc., but that made from wheat is used to a much greater extent than the others and is the one referred to in this article. As there are so many different kinds of wheat, and each kind is further classified into four different grades, it is a difficult problem to know just what kind of flour one is buying, without subjecting it to a thorough test. The way to determine the best flour for the purpose desired and how to use it properly is the object of this article.

The United States Department of Agriculture gives the following as a standard for good flour.[1]

> Flour is the fine, sound product made by bolting wheat meal and contains not more than thirteen and one-half (13½) per cent of moisture, not less than one and twenty-five hundredths (1.25) per cent of nitrogen, not more than one (1) per cent of ash, and not more than fifty one-hundredths (0.50) per cent of fiber.

Good flour should be sweet to the sense of taste and smell, having a feeling of sharpness to the grain, be free from must or other odors or tastes, and have a creamy-white shade or color. It should be strong, yielding not less than 33⅓ per cent of moist gluten, and must absorb not less than 50 per cent of its weight of water to make a dough that will just begin to stick to the fingers when lightly handled; straight, made from good, sound wheat, high ground, well dressed, and free from must, containing from 90 to 95 per cent of the whole product of the wheat in flour (that is after the feed is taken out); and must be capable of yielding a well-risen loaf of good color, texture, odor and taste. It takes about 4½ bushels of wheat, or 270 pounds,

[1] United States Department Agriculture, Office Secretary, Circ. 13 (1904), p. 8.

to make a barrel of flour of 196 pounds, the other 74 pounds being the bran, germ, etc., and known as "feed."

Wheat grown in different sections of the country varies greatly in the percentage of the yield of gluten. For instance, wheat grown in California is weak in gluten, and a much better bread can be made from it if mixed with Kansas or a Northern wheat, in about the proportion of two-thirds California to one-third Kansas or Northern wheat.

1. *Tests for color, smell, taste and feel.* The color of flour can best be determined by placing a small quantity upon a sheet of glass or a thin board, about 4 x 8 inches square, and smoothing it out with a flour spatula, pressing the spatula down to one edge of the board. Separate the flour on both sides and on the thick end with one edge of the spatula, leaving a strip about three-fourths of an inch wide on the board. On turning the edge of the board farthest away slightly down, the loose flour can easily be pushed from the board. In this manner eight or ten different samples can be placed on the same board by sliding the pressed samples side by side as they are added, always trimming the edges so they will fit snugly together, and taking care to give the same pressure to each sample. After pressing them lightly again with the spatula, taking two or three at a time, and trimming the edges, the samples may be examined for color. A creamy white shade is the best. A dead white, gray or blue indicates overbleaching, inferior wheat of low grade, and a poor quality of gluten. The gray or blue should be specially avoided. If the board is slipped under water, held there for a few seconds, and then placed on a table for a few minutes, approximately the color of the resulting bread will be revealed.

The taste should be sweet and nutty without a suspicion of acidity or must. There should be no disagreeable taste or smell whatsoever.

A strong flour will feel sharp and gritty to the fingers, while a weak flour will feel soft.

2. *Microscopic examination.* This is to detect sprouted wheat, but is certain to show any adulteration by other cereals on account of the characteristic shape and size of the different starch granules. Any undue proportion of bran or any foreign substance can also be detected in this examination.

3. *Moisture determination.* Moisture is determined by weighing about two grams of flour into a small porcelain moisture cup, drying at

212° F. for five hours in a water oven or other oven where the temperature can be controlled, then cooling in a desiccator, and weighing. The loss in weight represents the moisture driven off, from which the percentage can be calculated. See the record card on page 97.

4. *Absorption.* To determine the amount of water the flour will absorb, weigh 34 grams into a coffee cup and run into it from a burette about 18 cc. water at room temperature. Mix this thoroughly, with a stiff table-knife, into a dough and feel lightly with the dry fingers. If the dough does not hold to the fingers, add water, about ½ cc. at a time, and mix thoroughly until it just comes away without leaving any dough on the fingers. Read the burette and multiply the number of cubic centimeters of water used by 10. Spring wheat or hard winter wheat flour will average about 198 cc. of water to 340 grams of flour, while soft winter wheat flour will average only about 188 cc. of water. The percentage of absorption can thus be calculated. Fill the cup with water and let it stand for about one hour, when it can be used for the gluten test.

The percentage of moisture in flour varies with the kind of wheat, the locality, the rainfall and soil in which grown, etc.; as a rule new wheat will not absorb as much water as old wheat, and the same is true of newly ground flour. Strong wheats take up the most water and retain it during baking, hence yield the most loaves to the barrel. If flour is stored in a dry warm room it dries out very quickly and consequently will absorb more water. If stored in a damp room the reverse is true, as it takes on moisture. Flour should be stored in a dry, cool, and well-lighted and well-ventilated room, never in a cellar or basement or with other articles such as kerosene, coffee, etc., as the odor from them is readily absorbed.

5. *Moist gluten.* In determining this, use the dough left in the cup, by placing it in a piece of linen cloth and tying it up closely. Wash under a tap, using gentle kneading, until all starch is removed as determined by the water running perfectly clear. If no tap is available wash in a basin, changing the water frequently until it is perfectly clear. It is better to do the washing over a screen of bolting cloth or of very fine wire gauze, so as to catch any small particles of gluten which may pass through the cloth and which may be recovered by gently rubbing the ball of gluten over the screen. Remove the gluten from the cloth and dry by squeezing it first in one hand and then in the other, drying the hands with a towel, until the gluten begins to stick to the hand. Weigh the gluten and calculate the percentage of moist gluten.

The gluten to be of good quality must be susceptible of being pulled out into threads or into a thin sheet, be creamy yellow in color, tough and elastic, and of homogeneous texture. A dark, gray, or red gluten, or one spongy in texture, is not of good quality. It if is desired to determine dry gluten, the moist gluten may be placed in a drying oven on a piece of paper capable of resisting heat, or in a glass or porcelain vessel previously weighed, dried to constant weight at 212° F., cooled and weighed, the percentage being calculated from the weight of flour originally taken. Wet gluten of good quality when dried will lose about two-thirds of its weight.

6. *The expansion test.* This is another test for gluten, made by weighing out 340 grams of flour and putting about two-thirds of it into the kneader with 12 grams of granulated sugar and 5 grams of salt. Mix 10 grams of a good compressed yeast with it in a cup, add at about 85° about one-fourth of the water required as determined by the absorption test, then pour this together with all the water into the kneader, and beat for ten minutes. Pour in the rest of the flour and knead for ten minutes. If the absorption test is correct the dough will leave the kneader without sticking and feel soft in the hands. Place the dough in a glass jar which has a graduate on it (a battery cell is good), press it down level on the top, then place it in the expansion box or other apparatus where the temperature can be maintained at between 85° and 90°. Note the height to which the dough will rise by placing a small square on the glass door of the expansion box, just in front of the jar. This reading should be made at the end of the first hour and every half hour thereafter until the dough has reached a height of about $4\frac{1}{2}$ inches, when it should be read every five minutes. The height to which the dough rises, together with the time taken, determines the quality of the gluten.

It is the quality, and not necessarily the quantity of gluten, that produces the largest expansion. Flour containing a very good quality of gluten will rise higher in less time than one containing a large percentage of gluten of poor quality. A strong flour may rise more slowly than a weaker one but will reach a greater maximum height and will remain at this height longer before breaking down. Flour may rise to a good height in a comparatively short time, but unless it has the strength to stand, or goes to pieces when touched, it is not a safe flour for breadmaking. If too little water is used in the dough, it will be too stiff and will not rise so fast, whereas with too much water it will rise too fast, so it is important to get the absorption right.

7. *Baking test.* Prepare the dough as for the expansion test, but instead of putting it in a glass jar mold it into two equal loaves and place in a weighed greased pan, then in the expansion box and let it rise to a gauge on the pan. This requires about one hour and a half. See the record card for data.

If bread is baked too quickly, or in a very hot oven, perhaps at 500°, by the time it is thoroughly baked on the outside the center of the loaf will be spongy. If left in the oven long enough to bake thoroughly all the way through it will bake to a crisp on the surface. If baked at a lower temperature, about 360°, it may be thoroughly baked in the center and at the same time be in good condition on the surface of the loaf, or in other words it will be uniformly baked all the way through. Biscuits, not being so thick, may be baked in a very hot oven, about 500°, as they will bake all the way through before the crust has time to become damaged by the intense heat. Fifteen to twenty minutes is all the time required, depending upon the thickness of the dough and the heat of the oven.

8. *Texture.* The crumb of bread should be full of small, even pores. Large irregular pores are not desirable, but what causes them has not been satisfactorily explained. One good authority states that "these occur in overkneaded or overraised dough," but my experiments do not bear this out. I took two samples of the same flour, used the same ingredients, and treated them alike with the exception of the kneading, one being kneaded twenty minutes and the other one hour. There was a slight difference in texture, but the one kneaded one hour had a better flavor and made a much whiter loaf. Kneading or beating dough is an artificial but harmless process of bleaching. My conclusion is that the more dough is kneaded intelligently the better; the trouble lies in the way kneading is done and not in the time. One cause of large irregular holes is insufficient kneading.

In the home where there is no mechanical kneader available, a very good way to mix dough is to put part of the flour in a crock with all the other ingredients, except the lard, using enough flour to make a batter that can be easily stirred with a big spoon. Stir vigorously for from twelve to fifteen minutes, then stir in more flour, a little at a time. Finish kneading with the hands, sinking all the fingers into the dough, occasionally squeezing the dough to get the flour worked well into it, and taking care to sprinkle only a little flour at a time and not to fold any lumps of flour into the dough. When the dough just sticks to the hands but can be pulled away easily it has

enough flour in it and is ready to be placed in pans when the kneading is finished. When lard is used it may be added after about ten minutes' kneading.

A record card showing data obtained in a recent test of a flour is given below to illustrate the calculations involved.

RECORD CARD.

Flour No. 50. *Date June 10, 1910.*

Color	10	Granulation	10
Odor	10	Microscope	10

MOISTURE.

	Grams
Weight of cup and flour	20.7413
Weight of cup	20.0405
Weight of flour	.7008
Weight of cup and flour (dry)	20.67
Loss	.0713
Per cent of moisture	10.1

GLUTEN.

Gluten (moist)

Grams	17
Per cent	50
Quality	excellent.

195 cc. water to 340 grams flour; put into kneader at 10:00 a.m. Into expansion box at 10:30 a.m.

			Inches				
At	11:30	1 hour	2	At	1	2½ hours	4⅛
	12	1½ hour	2⅞		1:15	2¾ hour	5⅛
	12:30	2 hour	3¾				

Put into oven 12:04 p. m. Out 12:54 p.m. Baked 50 minutes at 360° F.

	Grams
Weight of pan and dough	748
Weight of pan	198
Weight of dough	550
Weight of pan and dough	748
Weight of pan and bread	698
Baked out	50
Weight of bread	500

LOAF.

Color	10	Texture	9
Taste	10	Volume	95 cu. in.
Odor, hot	10	Loaves to barrel	295

To find the number of loaves of bread to the barrel we first complete the weight of the dough from the ingredients used.

Ingredients Used Per Loaf.

340 grams flour
195 cc. water
12 grams sugar
10 grams yeast
5 grams salt

562 grams, weight of dough in kneader
550 grams, weight of dough when taken out

12 grams weight of dough left in kneader

From the record card we see that 50 grams of moisture, or one-eleventh, actually baked out of the 550 grams of dough put in the pan. This gives approximately one gram of moisture in the 12 grams of dough left in the kneader, or a total of 51 grams which would have baked out from the entire quantity of dough.

562 grams, weight of dough put in kneader
51 grams, baked out

511 grams weight of loaf if all the dough had been used

The pound loaf weighs 454.5 grams, and a barrel of flour should make 262 such loaves.

$$454.5 : 511 = 262 : x$$
$$x = 295 \text{ loaves to the barrel}$$

In making these tests the importance of absolute accuracy to insure uniform results should be emphasized.

As the different brands of yeast throughout the country vary so much in strength and composition, and as salt, like cold, retards fermentation—depending upon the amount used—it is a difficult matter to say just how much yeast should be used in baking, but the amount required depends mostly upon the time consumed in the baking. Should quick results be desired, make a straight dough, using more yeast as in the formula given above. The amount of yeast given in the following recipe will give good results with a sponge or straight dough where it is set and allowed to rise from eight to ten hours, or over night. One half the amount of yeast, if equal in quality to Fleischmann's compressed yeast, could be used with good results, but would require more time.

Suggested Recipe for Bread Making.

	Grams.	*Approximate avoirdupois equivalent.*
Flour	1818	4 lbs.
Sugar	60	2 oz.
Salt	25	1 oz.
Yeast	14	½ oz.
Water (see absorption test)	1060	35 oz.

If sweet milk be substituted for about one-half the amount of water it will greatly improve the bread, or still better use all milk, in which case about one-third of the salt may be omitted. If lard is used, it should not be added until after mixing the dough ten minutes.

It is extremely unsatisfactory to pick up a cook book and read at the bottom of a recipe something like this, "bake in a quick oven," the time required to bake at a given temperature not being stated, when this is one of the most important details in a recipe. I can take almost any quantity of the proper ingredients, treat them as I do common bread, bake properly and get a good wholesome bread, but if I take the best recipe in the world and do not follow it correctly, or do not bake properly, I find it to be impossible to turn out a good loaf. I have known flour made by one miller at one time out of one lot of wheat to be sent to different bakers and to have one baker report that the flour was so poor he could not use it, while others had fine results and asked for more flour of the same kind. Too often is it the case that the fault lies with the baker's not understanding the flour, and not with the flour itself.

I feel that I can not emphasize strongly enough the importance of the art of baking. By referring to the record card it will be seen that our bread is baked 50 minutes at a temperature of 360° F. This, of course, is in a small oven with only one or two loaves at a time. In large ovens where the temperature is not so easy to regulate and where many loaves are put in a pan at the same time it would require a little longer, depending upon the quantity and thickness of the dough which the heat has to penetrate. I hope to live to see the day when the oven in every kitchen in America will be equipped with a thermometer and a heat regulator.

If our enthusiastic twentieth century women want to do something noble, something really worth while, to better themselves and humanity at large, I would like to suggest that they direct their thoughts along this line of work.

THE LEAVENING AGENT IN SALT-RISING BREAD.

WINONA WOODWARD.

Student Assistant in Home Economics, Bacteriological Laboratory, University of Missouri.

The question of salt-rising bread fermentation has been studied very little from the laboratory standpoint. In so far as the cause of its rising has been questioned, the explanation has been given that wild yeast falls into the bread from the air while it is being made or that there is such yeast in some of the ingredients used; that is, in the corn meal or in the milk of which the "batter" is made.

Recently Mr. H. A. Kohman, working at the University of Kansas, solated two organisms from corn meal with which bread can be made to rise. So far as known these have not been identified.

Work along this same line done in the bacteriological laboratory at the University of Missouri this last year, without knowledge of what was being done at the Kansas university, resulted in the isolation of a third organism capable of making bread rise.

Salt-rising bread is usually made by scalding a cup of fresh milk and pouring this over a quarter of a cup of corn meal, two teaspoonfuls of sugar, and one teasponful of salt. This is allowed to stand for several hours or over night in a warm place, when it should be light. To this batter warm water is added, one cupful for each loaf of bread desired, and flour to make a drop batter. This is allowed to stand in a warm place until light, then flour is added to make a stiff sponge and made into loaves. The loaves are allowed to rise until double their initial volume, then baked. Quite commonly the milk is not scalded but just warmed, and the sugar is added when making into a drop batter. The important thing is to keep the temperature right.

In taking up the work on salt-rising bread, tests were made to find which ingredient furnished the leavening power. The milk and corn meal used in starting the bread were used in sterile and non-sterile condition and kept at body temperature over night, but only the samples in which non-sterile corn meal was used were light and it was therefore concluded that the corn meal furnishes the leavening agent.

Two organisms were isolated from the corn meal, but only one of these in pure culture would leaven the bread. This organism is a small bacillus and a rapid gas producer. It forms spores which are rather resistant to heat as they are not destroyed by pouring hot milk over the corn meal. The best growth is made at the temperature 38° C.

This organism differs from those described by Mr. Kohman. One described by him is a short rod, which does not form spores and which does not liquefy gelatin. The other is a long rod, which forms spores and liquefies gelatin. The organism isolated at University of Missouri is a very short rod, which forms spores and does not liquefy gelatine.

Bread made with a pure culture of this organism has an odor different that of yeast bread, but not the disagreeable odor so often accompanying salt-rising bread making. This disagreeable odor, which some think is a necessary adjunct of salt-rising bread, is apparently present only when nonsterile milk is used; and generally when the bread is allowed to stand a long time in unfavorable conditions, so that putrefaction changes set in, due very likely to the action of micro-organisms present in the milk or acquired during the bread mixing process. As yet the organism isolated has not been identified with known bacteria, nor has a name been proposed for it.

From the data reported it is apparent that the fermentation occurring in making salt-rising bread may be due to the presence of one or more micro-organisms accidentally present in the corn meal used in making the batter used in starting the bread or introduced in some similar way. The organisms isolated at the University of Kansas and at the University of Missouri were not yeasts (Saccharomyces) but belonged to another group of micro-organisms. It is more than likely that other gas-forming organisms will be found which cause the fermentation in salt-rising bread making under home conditions, and it is not unlikely that in many cases two or more such organisms might be present at the same time. Additional study of the matter should be undertaken and it would be interesting to compare the flavor and quality of the bread when different micro-organisms are present.

As more comes to be known of the conditions necessary to the growth of the organisms causing the bread to rise, we can be more sure of success in making it.

A practical deduction from the work reported is that sterilizing the milk before mixing the batter is desirable since more uniform results may then be expected and a product secured which does not have the unpleasant odor often associated with salt-rising bread.

EDITORIALS.

The St. Louis Meeting.

Was it the longitude of St. Louis that caused the feeling of stability and permanence, of strength and readiness all through the third annual convention? Or was it the new conviction that Home Economics has found itself and is no longer on the edge of things and so looked upon with a sort of distrust?

The practical Middle West has always been hospitable to new measures that promised more comfort and freedom, it has originated plans and adapted ideas. The environment was therefore favorable, but beyond that influence the members showed in many ways that the principles for which the American Home Economics Association stands are accepted as a working platform and that from now on the campaign will be vigorously prosecuted.

Chief among the principles brought out in the meetings was the acquisition of knowledge concerning the articles of daily use, textiles as well as foods, which shall enable purchasers to secure reasonable values for their money. The necessary corollary will be an effort for the cultivation of taste which will make the most of a small income, and for the development of methods in daily management which shall promote the health and efficiency of the members of the family while leaving time for the intellectual needs and pleasures.

In short, the tone of the meeting showed that the authors and listeners alike believed in themselves and in their mission.

The commendation and the help given by members of the other societies was very gratifying and it is hoped that this coöperation will be more and more helpful as time goes on.

With this wider recognition comes upon the Association an added responsibility to "make good."

Your president feels that the future is secure in your hands and that the work will go on and spread very rapidly from this time forward.

—Ellen H. Richards.

Affiliation of American Agricultural Societies.

So many of the colleges of agriculture and mechanic arts offer courses in Home Economics that the attempt which is being made to affiliate a number of the agricultural societies in order that a uniform date and place may be selected for annual meetings is of interest. The need for such affiliation has been recognized for some time and the matter was brought to a head by the gathering of the many experts in various branches of agriculture at Washington, D. C., the middle of November last. The Association of Agricultural Colleges and Experiment Stations, the Association of Farmers' Institute Workers, and five other agricultural societies, as well as the National Association of State Universities, were in session within the period between November 10–18, and many questions of great interest to students of science and pedagogics were discussed.

In order formally to bring the attention of the various interested societies to the matter a meeting was held of delegates from twelve such societies to consider a plan of affiliation to be submitted as a basis for action. The plan took the form of a constitution which will be submitted to the different societies at their next meetings. The proposed affiliation does not disturb the autonomy of the various societies in any way, but in providing for a central organization it prepares the way for two important measures, namely, a meeting biennally of the various societies at the same time and place so far as this is practicable, and the publication of a scientific journal to meet the common needs of the affiliating societies. Such a journal would naturally serve as a medium for discussion, for reports in abstract of the meetings of the societies, and for notices, reviews, and contributions of general interest in the whole field of agriculture and related science. Each affiliating society would doubtless continue to publish full reports of its meetings and other literature much as at present.

If the plan for this new journal is carried out, it will undoubtedly contain much material of interest to students of Home Economics. As an evidence of this, it may be mentioned that at the recent Washington meetings many papers were presented of which this was true, including among others those presented at the Association of Farmers' Institute Workers by members of the American Home Economics Association.

Future Numbers of the Journal.

The April number of the JOURNAL will be a Housewives' Number, with most of its contents of especial interest to the woman in the home. It will contain among others the following articles: The Use of Labor Saving Devices in the Home, by J. Lebowitz; Household Service as a Labor Problem, by J. M. Rubinow; the Social Significance of the Home Economics Movement, by Mrs. Ellen H. Richards; and a number of interesting articles on the care and feeding of children, together with suggestive programs for the club and home.

Of late we have heard much about increased efficiency in business, which is to be brought about by a close study of methods and an introduction of such as shall save the present waste of time and energy of the worker. The bricklayer must lay more bricks in a day and with less fatigue than he lays his present quota; improved ways of using his muscles are to enable the piler of pig iron to double his results and his pay; the railroads, the mines, the machine shops are all urged to increase their output by improved methods. It would seem that these studies are to be made in all departments of practical life, and the household industries will not escape the application of this measurng line that tests efficiency. A beginning we shall try to make in the coming number to show how these principles may be applied to the doing of the daily housework.

The April number will also contain condensed reports from the now rapidly increasing number of state and city organizations of Home Economics and a full account of the important conference on extension work which was a part of the St. Louis meeting. The development of work outside the schools is destined to assume increasing prominence.

The editors wish to make this number of the JOURNAL very helpful to the woman who is chiefly interested in the problems that arise in the daily life of the home and they will welcome articles or suggestions of any kind. Present readers of the JOURNAL should use this opportunity to bring it to the attention of a wider circle.

A special feature of the June number will be the discussion of courses of study, several interesting papers given at the St. Louis Conference being the basis—this will furnish a large amount of suggestive material for the use of teachers in planning for next year. On this line also the editors will welcome the frankest criticism of present methods and suggestions for improvement.

NEWS FROM THE FIELD.

School for Housekeepers, University of Illinois.

This school was held January 16–27 at the woman's building. The courses given were as follows:

The House: General Work, 8:00 a.m., on the house, Miss Bevier; house planning, Mr. Weaver; applied design in the home, Mr. Kelley; color in the home, Miss Gibbs; fine arts in the home, Professor Lake; plants for the home, Mr. Dorner; landscape gardening, Professor Wyman; good architecture, Professor Ricker. Class Work, 1:00–3:00 p.m., on house planning, Mr. Weaver; applied design in the home, Mr. Kelley; household management, Miss Van Meter; furniture and furnishings, Miss Bevier.

Foods: General Work, 8:00–10:00 a.m., the vegetable garden, Professor Lloyd; cuts of meat, Professor Hall. Laboratory work three times in a week in 2 hour periods, covering the selection and preparation of foods, including bread, meat, eggs, milk, cheese, vegetables, etc., Miss Pincomb, Miss Rinaker. Demonstration lessons, 2 hour periods, Mrs. Barlow, Mr. Hepburn. Class Work, pure food, Miss Van Meter; dietaries, 3 lectures, Miss Usher; food for invalids, Mrs. Barlow; jelly making, Dr. Goldthwaite.

Clothing: General Work, sewing classes 3 times a week, 2 hour periods, Miss Dickinson, Miss Meadows; two demonstrations, 2 hours each on use of paper patterns and fitting a shirt waist and the hanging of a skirt, Miss Gibbs. Class Work, textiles, 2 lectures, Miss Dickinson.

Health: General Work, 8:00–10:00 a.m., public health, 2 lectures, Dr. MacNeal; insects undesirable in the home, Dr. Folsom; gymnasium classes, 3 times a week, 9:00–10:00 a.m., Miss Moulton. Class Work, public health, 2 lectures, Miss Kerr; home nursing, 2 lectures, Miss Balding.

A special evening meeting for the students of the school and their friends, was held January 23, which was addressed by Miss Abby L. Marlatt of the Department of Home Economics, University of Wisconsin.

University of Maine, College of Agriculture.

The course in domestic science was established in the fall of 1909 under Miss Laura Comstock as Assistant Professor. There are two courses offered, one a four year which gives the B.S. degree; the other a two-year course which gives a certificate only. The students entering the four-year course meet the college entrance requirement. We have three in this course and three in the shorter course. Extension work is done in two ways—through a correspondence course in cookery where Williams and Fisher's Elements and Theory and Practice of Cookery is the text book used. Questions are sent out and these are answered by those taking the work; answers are corrected and sent back to writer. Other extension work is done by speaking before women's clubs, granges, etc., throughout the state. There is but one member now on the teaching staff, but next year it is hoped that an assistant may be procured.

Missouri Home-Makers Conference.

The Missouri Home-Makers Conference was organized three years ago under the auspices of the Department of Home Economics of the University of Missouri. This January the fourth annual meeting was held in Columbia from the 10th to the 13th in connection with the Farmers' Week program.

Among the subjects presented were the following: What the women of the state can do toward the prevention of infant mortality, Mrs. W. C. Greene; the problem of dressing the infant, Mrs. Ivy Horner Selvidge; some recent advances in infant feeding, Miss Louise Stanley; a breadmaking demonstration; the curing of ham, Mrs. W. C. Hutcheson; some problems of butter making in the home, Miss Anna Kinney; why butter making in the home is not more successful, Professor C. H. Eckles; the small farm home, Mrs. Wilder; some of the inconveniences of the farm home, Mrs. W. T. Flournoy; planning of a house, Mrs. T. C. Wilson; the bacteriology of cleaning, a demonstration; farm management for women, Miss Hattie Paxton; household management, Mrs. F. B. Mumford; home care of sick, Miss Dora Batson; management of children, Mrs. J. Ed. Hall; adulteration of textiles, Miss Charley Tidd; what the women are doing in Michigan and what Michigan is doing for her women, Miss Jennie Buell; what Missouri is doing for her women, Mrs. W. McNabb Miller; what Missouri should do for her women, Dean Mumford; reports from local home-makers' clubs already organized; plans for further organization, Miss Ilena Bailey; meat cutting demonstration, Professor P. F. Trowbridge; some of the problems of the rural school, Mrs. Marie T. Harvey; relation of home. to rural school, Mrs. Cora Chapin; Home Economics in the rural school, Mr. R. H. Emberson; and the problem of getting Home Economics into schools in small towns, Mrs. C. G. Truett. A portable equipment for Domestic Science in rural schools was on exhibition.

In addition to the presentation and discussion of these papers, the following short course was given during the four days:

I. Food Work—1. Preparation of vegetables—Classification, comparative nutritive value, preparation and serving. This included work on fresh vegetables, cereals, and beans, 8–10 every day. Miss Stanley.

2. Cooking of meat—Composition and nutritive value of various cuts of meat, and method of preparation best suited to each with reasons. Opportunity was offered to see an animal cut up, showing wholesale and retail cuts. 2–4 every day. Miss Nesbitt.

II. Sewing—1. Hand work—Simple stitches and general principles of hand sewing. Discussion of when used to best advantage. Making of button holes, etc. 8–10 every day. Miss Humfeld.

2. Machine Work.—Fitting and making of simple waist. 2–4 every day. Miss Humfeld.

III. House Sanitation—A general survey of the principles of house sanitation. Miss Nesbitt. 12–1 every day.

IV. House Decoration—Study of art applied to home. Miss Dobbs. 9–10 every day.

V. Gardening—Professor Whitten.

VI. Butter Making—Professor Eckles.

VII. Poultry Raising.

Montana State College of Agriculture and Mechanic Arts.

During the last two sessions of the state legislature, liberal appropriations have been made for the work in Home Science. Two years ago the department moved into new quarters and now occupies the top floor of the new agricultural building, with a floor space 68 x 150 feet. This is divided into 2 laboratories for foods and cookery, 3 sewing rooms, a bed room, 2 class rooms, a dining room, lunch room, reception room and office.

Three courses are given, the regular college course, the four year preparatory course and the one year course. Practice teaching is offered for seniors in the college course. The department is in charge of Professor Lilla A. Harkins.

College of Agriculture, Cornell University.

The new Home Economics building for which the last legislature of New York state made an appropriation of $154,000 is to provide on its first floor an assembly room to seat five or six hundred persons, a reading room, offices and class rooms. One floor is to be devoted to domestic art, and another to domestic science with chemistry and bacteriology laboratories for research work. There will be a small apartment in which the registered students will in turn take charge of the housekeeping and learn to apply principles to every-day life. In the basement will be a cafeteria where students in Home Economics will be trained to feed large numbers, also a laundry where students will learn the technique of handling textiles and managing the industry in a home or community.

The Home Economics department at the present time has a four-year course leading to the degree of the college. With the present year there has been introduced into the course a department of house planning, furnishing and decorating. This is conducted by Mrs. Helen Binkerd Young, a graduate of the Cornell College of Architecture.

University of Pittsburgh.

According to a note in *Science*, the University of Pittsburgh announces the establishment of four industrial fellowships: No. 1, in the chemistry of baking, yielding $750 a year for two years, with a cash prize of $2,000, and Nos. 2, 3 and 4, for an investigation with a view to eliminating or abating the smoke nuisance in large cities, yielding $2,000, $1,500 and $750 per year, respectively, for two years, together with a large additional consideration.

Home Economics at the University of Porto Rico.

The University of Porto Rico, which is situated at Rio Piedras, offers courses in both domestic science and domestic art. The work in domestic science includes methods of cooking and cookery for the sick and convalescent. Special attention is paid to the preparation of native foods. Lectures and laboratory work are also provided in the course on the chemistry of foods. The students of domestic art study various stitches and their application and the making of undergarments and dressmaking. There is a course in millinery and art needlework. The university also offers a course in pedagogy.

For the last fifteen years there have been departments of domestic science and domestic art and for years this work has been required of all regular students for two years in each department.

Winthrop Normal and Industrial College, Rock Hill, S. C.

Recently the state legislature included cooking in its list of subjects which should be taught in the high schools, so that we felt that this institution should offer a normal course in domestic science which would fit students to go out as teachers. This year we offered such a course, and expect to graduate two from it in June, and several more next year. The normal domestic science course requires four years of work here, much of it the same as that of the other normal causes, with additional courses in home sanitation, advanced cookery, dietary work, laundry work, home nursing, food chemistry, food production and manufacture, and theory and practice of teaching in domestic science. Upon completion of this course the student receives the degree of B. S.

All seniors of the college have practical application of the principles of home-keeping by their residence for a week each time in the Practice Home, to which they go in groups of eight. While there, under the direction of Miss Hyde, they conduct the home and keep exact daily accounts.—MARGARET WHITTEMORE, *Teachers College 1907, Head of Domestic Science Department.*

Catharine A. Mulligan of the department of Home Economics writes: "My girls have been experimenting with the soy bean. Our Professor Morgan, head of the agricultural experiment station, has been urging its use both as a crop to enrich the soil and to feed cattle. We cooked the beans as we do navy beans down South, and as Boston baked beans, using the fireless cooker for part of the process. We used the meal ground here, containing 20 per cent of fat, and also meal from Seattle with the oil partly expressed.

Original Work in the University of Tennessee.

"We made muffins and batter cakes and brown bread, using soy bean meal in place of corn meal.

"The meal has 38 per cent of protein in it, so in this day of high priced meat the soy bean is a very satisfactory substitute."

The Housekeeper's Conference, held January 17–28, was designed to aid the women of the state in their household needs. Practical instruction in cooking, sewing, and home nursing was given in the new and completely equipped laboratories of the woman's building, and ample opportunity offered for discussion of individual problems.

Housekeepers Conference, Agricultural College of Utah.

The general fee for the course was one dollar, the public lectures being free. The following subjects were treated:

Sewing lessons, by Rhoda B. Cook, on drafting of seven and nine gore patterns for skirts, and the making of one woolen skirt.

Home nursing lessons, by Florence M. Brown, Lesson I, the sick room; Lesson II, food for the sick; Lesson III, emergencies.

Cooking Lessons, by Florence I. Dudley, on soups, breads, meat and vegetable cookery.

Public Lectures:—The Simplifying of Housekeeping; A Demonstration of the Cuts of Beef; The Care of Children; The Production of Milk; The Vegetable Garden.

Irish Training School of Domestic Economy.

This school is situated at St. Kevin's Park, Kilmacud, Stillorgan, County of Dublin. The grounds include about three acres, including a large fruit and vegetable garden. In addition to the general courses a limited number of students are selected each year for training as teachers. For these a course of at least two sessions is given, including the principles of practical elementary science involved in domestic work; cookery; laundry; dressmaking and home sewing; housewifery (including household routine and the keeping of accounts; and practice in the these teaching of subjects. Practical instruction in home hygiene and sick nursing is also afforded, and instruction is given in the theory and practice of education.

Conference on School Lunches.

A most successful conference on school lunches was held by invitation of the Women's Educational and Industrial Union on December 3 in Boston. It was the opinion that such conferences would be a great help to the workers, and it is the intention to have some sort of organization. The many cities represented showed a variety of plans made according to local conditions—most of these have already been described in the JOURNAL and others will receive attention later. Most of the cities furnish food on a catering plan with an educational bias, although some have little scientific supervision.

A slightly different idea underlies the furnishing of the 10:30 a.m. glass of milk or sandwich to the anaemic children. In Boston, where ten schools were tried last year, the authorities have authorized opening ten more and have assumed whatever expense for fitting may be needed to a prescribed limit. The masters are coöperating in an efficient manner and with the employment of a school visitor in each district there is reason to believe that the schools will themselves handle such a simple matter as a part of the routine, but that all food served will be paid for even if certain families are aided outside. It is rightly held that it must not be made easy to shift parental responsibility.

A Successful German Society for Supplying Food.

Consul-General Richard Guenther of Frankfort, Germany, describes in a recent number of the U. S. Daily Consular and Trade Reports an association of that city for supplying meals and other commodities to its members. This organization, known as the Gesellschaft für Wohlfahrtseinrichtungen, was established on a small scale in 1891 as a joint stock company for the benefit of the poorer and working classes of the population, and has steadily increased and expanded its work. It now maintains eleven restaurants, or eating-rooms, seven canteens (where liquid refreshments and liquors are to be had), four coffee kitchens, one portable kitchen, one store for the sale of various provisions, two buffets or lunch-rooms, and one lecture hall. These institutions are well distributed in places where manufacturing or traffic abounds, also along the harbor and near the railway stations. Last year 475,000 cups of coffee were supplied at 6 pfennigs (1.4 cents) a cup, over 500,000 cups of milk at 7 pfennings, and 20,000 cups of cocoa at 10 pfennigs.

Last spring the administrative offices were moved into a new building owned by the company, in which are also located lodging rooms for the unmarried workmen, a steam laundry, a bathing hall, and a bakery. The establishment is conducted

strictly according to commercial methods, and its staff includes a general manager, three assistants, and a corps of about 100 cooks, stewards, etc. The sales last year aggregated nearly $90,000.

A well-cooked and ample dinner, consisting of soup, meat, vegetables, and potatoes is served for 35 pfennigs (8.3 cents). Formerly it cost only 30 pfennigs, but was advanced because of the great increase in the price of foodstuffs. Single portions of meat or vegetables can be had at rates correspondingly low. Sales of lemonade and soda water are on the increase, although a considerable quantity of beer (in bottles) is disposed of. Cheap cigars, cigarettes, and smoking tobacco are also on sale. The price of lodging per week ranges from 38 to 60 cents.

Free libraries and reading rooms are maintained in this and another building of the company. In the city of Offenbach, and in other industrial centers, institutions after the plan of this Frankfort model have been established and confer much benefit on the persons using them.

Second International Congress on Alimentary Hygiene and Rational Nutrition of Man.

This congress, held October 5–12, was one of about 70 which formed a feature of the Brussels International Exposition of 1910. Like the first congress, held in Paris, in 1906, it was due to the initiative of the French Société d'Hygiène Alimentaire.

The Brussels congress was divided into seven sections, namely: (1) biological physics and energetics; (2) physiology and physiological chemistry—rational nutrition and dietetics; (3) hygiene of nutrition, bacteriology, and parasitology—food poisoning; (4) food materials—their composition, analysis, and adulteration, with subsections on general food materials and on dairy products; (5) potable waters; (6) legislation, inspection, suppression of fraud, statistics of food adulteration; and (7) teaching of rational nutrition and hygiene—methods of popular instruction in the subject, coöperative work, administration of food work, food charity work, and food in relation to sociological questions.

The congress was called under the patronage of the King of Belgium and the Belgian Government, and numbered among its officials many men of prominence. Its sessions, as of other congresses at the Brussels Exposition, were held in the Palais des Fêtes. The attendance was large, particularly the representation from various European countries. Dr. H. W. Wiley acted as chairman of the American committee, and Dr. C. F. Langworthy as chairman of the American sub-committee on section 1.

The principal activities of the congress centered in the section meetings and the general conferences, both of which were of great interest. The plan was followed of printing and distributing the papers in advance, with a view to economizing time, as an author could then simply summarize his paper and present his results for discussion. The plan adopted permitted the greatest possible amount of discussion and interchange of information in a given time. In many cases recommendations were adopted regarding future work having to do with the subjects presented.

Much interest was manifested in the energetics of nutrition, and the papers in section 1, which had to do with this subject, were particularly numerous. The interest in questions of hygiene was shown by the able papers in section 3, which

included such topics as the danger of exposing foods for sale without due protection from dust and dirt, physical methods for preserving food, including sterilization and refrigeration, food poisoning of different types, chemical and bacteriological requirements for potable waters, and the prevention of tuberculosis infection through milk. Other papers which had to do with milk and dairy products formed a part of the list presented in section 4.

The list of papers in section 7, likewise a long one, treated of such subjects as the feeding of infants, the food of laboring men, diet in different climates, army diet, and diet in rural regions. The educational side of the work was also strongly emphasized in this section with papers on the teaching of nutrition in schools, the methods followed in Holland in popularizing work in rational nutrition and hygiene, and the methods of teaching Home Economics followed in a number of American colleges.

In view of the interest and activity in human nutrition in this country, it seemed desirable that the American work along these lines should be adequately represented at the Brussels congress, and an effort was accordingly made by Dr. Langworthy to collect papers and other illustrative material. The response from the teachers, investigators, and others concerned was quite general, although the time was short. Some thirty papers were received from the landgrant institutions, other colleges, normal schools, etc., in the United States, which give domestic science courses.

The following is a partial list: Course in Domestic Science, Domestic Science Division, School of Agriculture, University of Minnesota, Juniata L. Shepperd; The Department of Home Economics, University of Wisconsin, and Its Work, Abby L. Marlatt; Research Work in the Domestic Science Division, College of Agriculture, University of Minnesota—papers by Florence Gaumnitz and Mary L. Bull; Outline of Course in Domestic Science, College of Agriculture, University of Minnesota, Martha B. Moorhead; The Feeding of School Children, Caroline L. Hunt; The American Home Economics Association and Its Work, Benjamin R. Andrews; The Respiration Calorimeter at the Institute of Animal Nutrition of the Pennsylvania State College, H. P. Armsby; The Bomb Calorimeter, Methods of Standardization, Choice of a Standard Calorimetric Substance, and the Use of a Variable Water Equivalent, J. A. Fries; The Influence of Type and of Age Upon the Utilization of Feed by Cattle. Investigations at the Institute of Animal Nutrition, Pennsylvania State College, H. P. Armsby and J. A. Fries; Description of the Improved Respiration Calorimeter Installed at the Office of Experiment Stations in the Department of Agriculture, and a Statement of the Work Which is Being Undertaken With It, C. F. Langworthy and R. D. Milner; Progress Report of Investigations in Human Nutrition in the United States, in 1906–1910, C. F. Langworthy; The Relative Ease of Digestion of Cheese as Compared with Beef, C. F. Langworthy and R. D. Milner; Technical Reports, Popular Bulletins, and other Nutrition Publications of the Office of Experiment Stations, C. F. Langworthy; The Origin and Development of the Nutrition Investigations of the Office of Experiment Stations, U. S. Department of Agriculture, C. F. Langworthy; Prevention of Tuberculosis Infection Through Milk, M. P. Ravenel; The Working Man's Food in New York and Popularizing Instruction in Rational Feeding, Winifred S. Gibbs; Notes Describing Briefly the Work That is Being Accomplished in This Country Along the Lines Outlined in Section 7, Ellen H. Richards; and Dietary for One Week for a Family of Five at a Cost of Five Dollars, Electra H. Cobb, Alice V. Gould, Bertha M. Nutting, and Allae C. Slater, Rhode Island State College.

BOOKS AND LITERATURE.

Report of the [Massachusetts] Commission on the Cost of Living. R. Luce et al. Boston, Mass. State. House Rpt. No. 1750, 1910, pp. 752.

This volume contains a mass of data relative to the cost of living, as gathered by the Massachusetts State Commission in 1910, and deserves the attention of all students of Home Economics. Its scope may be indicated by its section headings of price statistics, wages and hours of labor, chief items of expenditure, general analysis and classification of these items, social wastage, individual wastage, changes in supply, changes in demand, changes in value of money, effects of increase of cost of living and conclusions. There is also an appendix discussing public markets in Boston; family budgets; waste of health; Massachusetts farm produce; current explanations of high prices; prices of trust-controlled commodities; statistics of crime, pauperism, and insanity, agriculture in Massachusetts, meat supply, and markets; articles purchased in Boston and reweighed and measured by the State Department of Weights and Measures; savings and coöperative banks; and comparative expenditures at state institutions.

The findings of the commission with regard to the causes of the recent advance of prices are that the primary world-wide cause is the increase of the gold supply. In the United States it has been greatly accelerated by an enormous waste of income "through uneconomic expenditures for war and national armament and through multiple forms of extravagance, both public and private, and of wastage, both individual and social." It has been further promoted by factors affecting production and consumption, such as the drain of population from the land to add to the non-producing food consumers of cities; uneconomic methods of production and distribution; and the increase in the standard of living coupled with a national tendency to extravagance. The tariff, trusts, and labor unions are not regarded as direct and active causes.

Among the recommendations for legislation are the establishment of a commission of commerce, before which citizens may lay complaints of injustice; a commission on market improvements; the enactment of a law requiring packages of food products to be labelled as the net weight or volume of their contents; the better inspection of cold storage plants; and an improvement in the methods of gathering statistics.

Wage Earning Women. Annie Marion McLean. MacMillan Co., New York. 1910. Pp. 202. Price $1.25.

This is a study based on the work of some twenty investigators who made detailed studies of women in the industries of New England, New York City, New Jersey, Pennsylvania, the Middle West including Chicago, and the Far West. The book is descriptive of conditions as they may be observed by one going into the shops

and mills. It is further a very readable volume, vivid with detail. The study was made under the auspices of the National Board of the Y. W. C. A., and Miss Grace H. Dodge of the Board contributes an introductory word. The last two chapters deal with Uplifting Forces and Suggestions for Improvement.—B. R. A.

A Manual of Personal Hygiene. Proper Living upon a Physiologic Basis. By Eminent Specialists. Edited by Walter L. Pyle, M.D. Fourth Revised Edition, 12mo, of 472 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1910. $1.50.

This is a revised edition of a standard text book.

The Practical Teaching of Housewifery to Girls in the Elementary Schools. Lucy A. Crass (*Pub.. Health* [London], 24 (1910), No. 1, pp. 6–10, figs. 4).

The main purpose of this article is to describe the practical way in which the teaching of housekeeping is being conducted in Manchester, England.

Good provision for the teaching of cooking and laundering is found in over 50 centers, and more than 30 special teachers are employed in teaching these subjects to girls over 11 years of age. Special courses in the feeding and care of infants are given by 2 specially qualified teachers to the girls in grade 5 and above. The housekeeping instruction is not given in the schools but in cottages of the type lived in by most of the children attending the centers. These cottages are tastefully but simply furnished, and are equipped with suitable but not elaborate cooking and laundering appliances. The teacher lives at the center. Each course extends through 7 or 8 weeks and the pupils attend for the whole of the ordinary school hours during this period. By this continuous term of instruction girls can get a much more comprehensive view and a much better grasp of the subject of household management than is possible when isolated lessons are given. Twelve girls attend at one time.

In addition to the practical instruction in housekeeping, sewing, cooking, and laundering, lectures are given by the teacher on 2 or 3 afternoons of the week on such subjects as the choice of a house, ventilation, drainage, division of income, household accounts, management and care of household linen, choice of food, clothes, etc. A fully qualified nurse comes to the center one afternoon each week and lectures on the care and feeding of infants, and under her superintendence the girls bathe, dress, and tend a real live baby loaned for the purpose. The general plan of the week's work is outlined, The work is divided into three sections, namely, cooking, laundering, and housekeeping, and the pupils are also divided into three groups of four girls each, each being responsible for one section of the work for a week at a time, taking each section in rotation.

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